MAN BUILDING

LEWIS RANSOM FISKE, LL.D.

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MAN-BUILDING

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A TREATISE ON HUMAN LIFE AND ITS FORCES

BY

LEWIS RANSOM FISKE, LL.D.

CHICAGO
THE SCIENCE PRESS
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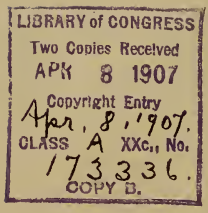

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PUBLISHER'S PREFACE TO SECOND EDITION

ALL over the country there is, as never before, a tendency on the part of men to study themselves; to search out the causes of growth, physical and mental; to discover the fountains of power which bring success and happiness. These conditions have produced a demand for just such a book as "Man-Building."

This book was originally brought out in 1901, an edition of one thousand copies being printed at that time. After receiving marked attention in the limited circle in which it became known "Man-Building" was for a time lost sight of. Recently the re-awakened interest of the public in the subjects which the book covers so admirably led to a popular demand for it—a demand which for some time could not be filled, as all the copies which had comprised the original small edition had been taken up. In response to this demand The Science Press secured the right to publish "Man-Building" for a general circulation.

There are many builders in the world,—builders

of buildings, of books, of pictures, of businesses; but the greatest of all builders is the man-builder. The industry of man-making heads the list of industries.

Why not, then, a book on man-building?

Everybody is in the man-building industry; mother with her child; teacher with her pupil; business man with employe, and every man with himself.

Why not, then, a science of man-building? Why not a book to formulate and teach that science? "Man-Building" is that book.

Dr. Fiske names and analyzes the laws which control the symmetrical growth of men and women in body, mind and character, and he does so in such a clear, specific style that no one can fail to understand these laws, in the first place, or fail to see how to apply them, in the second place. "Man-Building" is practical. The truths of its teachings can be applied by men and women in their everyday occupations. It is for this reason chiefly that we have re-published it and now offer it for general distribution.

THE SCIENCE PRESS

CHICAGO

AUTHOR'S PREFACE TO FIRST EDITION

THE author has sought a title for this book which would clearly express its character. From infancy to mature years there is built up a physical and mental structure which occupies a place of special honor in the world of being. Man is "but little lower than God." This statement is based on the high order of his powers. But he begins life in a condition of utter feebleness. He is, when he reaches manhood, so much more than the new-born child because of the operation of a building process which must be carried forward strictly under prescribed laws of development, if the largest results be obtained.

This is not a text-book, but a book for general reading. Yet it embraces the broad principles of three distinct but interrelated departments of science—the psychological, the physiological, and the sociological — all belonging to human life. The faculties of the mind are here presented, their functions unfolded, and the methods of their training carefully stated. The mind acts through

the body and is acted upon by the body. The offices of this physical structure need to be understood and its reactive power considered. And each individual is not only an individual but an inseparable component of the race. Without the world about him man's life would be sadly and fatally incomplete. Any attempt to understand the individual in the absence of society with its institutions, the privileges it presents, and the duties it exacts, must be a failure.

The purpose of this book is to aid the young in developing their powers up toward the fullest measure of capacity, and to assist the teacher in supervising the work of his pupils in their preparation for the duties of life. There have been many able scientific works given to the public on Psychology, on Physiology, and on Sociology, but none of them have combined a discussion of the broad principles belonging to these several departments of truth in their bearing practically on manhood. The aim of these works has been simply scientific, not directive as to character or to aid in the gaining of the noblest and most efficient life. The author has sought to answer the question, what can be done to help young people develop and use the powers of their being for their highest good? In carrying out our purpose the mind is analyzed, the functions of the powers

pointed out, and the methods of development given. The laws and forces of life are sought to be clearly defined, bringing us face to face with the privileges offered and the duties imposed. He who would make the most of himself must understand what his powers are and how they should be employed; what his opportunities are and how they can be utilized. This book has a positive practical aim in man-building.

TABLE OF CONTENTS

INTRODUCTORY

CHAPTER		PAGE
I.	"Know Thyself"	3
II.	Man's Dualistic Nature	6
III.	The Body a Servant of the Mind	10
IV.	The Body an Instrument of Knowledge	14

PART FIRST

PSYCHOLOGICAL

V.	Analysis of Mental Life	21
VI.	Mental Potentiality	25
VII.	Passing from the Potential to the Actual	29
VIII.	The Light of Consciousness	32
IX.	The Philosophy of Attention	36
X.	The Training of Attention	39
XI.	First Forms of Knowledge	44
XII.	First Forms of Knowledge—Continued	49
XIII.	Intellectual Training of the Child	54
XIV.	Mental Growth	58

TABLE OF CONTENTS

CHAPTER		PAGE
XV.	SECOND FORMS OF KNOWLEDGE. (*Memory*)	62
XVI.	SECOND FORMS OF KNOWLEDGE—Continued. (*Association in the Action of Memory*)	68
XVII.	SECOND FORMS OF KNOWLEDGE—Continued. (*The Life as Perpetuated by Memory*)	72
XVIII.	SECOND FORMS OF KNOWLEDGE—Continued. (*Reproduction as Imagination*)	77
XIX.	SECOND FORMS OF KNOWLEDGE—Continued. (*Use and Abuse of Imagination*)	83
XX.	THIRD FORMS OF KNOWLEDGE. (*First Step—Concepts*)	88
XXI.	THIRD FORMS OF KNOWLEDGE — Continued. (*Second Step—Judgments*)	93
XXII.	THIRD FORMS OF KNOWLEDGE — Continued. (*Third Step—Reasoning*)	98
XXIII.	THE LOGIC OF DEEDS	104
XXIV.	TRAINING OF THE POWERS OF THOUGHT	109
XXV.	FOURTH FORMS OF KNOWLEDGE. (*First Principles*)	114
XXVI.	FOURTH FORMS OF KNOWLEDGE—Continued. (*First Principles*)	120
XXVII.	FOURTH FORMS OF KNOWLEDGE—Continued. (*The First Cause*)	125
XXVIII.	THE SCEPTRE OF THE HEART	130
XXIX.	FEELINGS DISCRIMINATED	134
XXX.	EQUIPMENT OF FEELINGS	140

TABLE OF CONTENTS

CHAPTER		PAGE
XXXI.	Control and Training of the Feelings	145
XXXII.	Involuntary Activities	150
XXXIII.	Will Defined	154
XXXIV.	Dependence of Will	158
XXXV.	Motives	162
XXXVI.	Volitions are Caused	166
XXXVII.	The Symmetry of Mental Life	170
XXXVIII.	Character	174
XXXIX.	Training of the Will	179
XL.	The Office of Conscience	183
XLI.	The Training of Conscience	187
XLII.	The Power of Convictions	192
XLIII.	The Spiritual	196

PART SECOND

PHYSIOLOGICAL

XLIV.	Integrity and Differentiation of the Body	203
XLV.	The Care of the Body	206
XLVI.	Brain Forces	211
XLVII.	Development in the Field of the Physical	216
XLVIII.	Persistence of Developed Forces	219
XLIX.	Heredity	225
L.	Impairing the Energies of Life	229
LI.	Interaction of Mind and Body in the Sphere of Morals	234

TABLE OF CONTENTS

PART THIRD

SOCIOLOGICAL

CHAPTER		PAGE
LII.	COMMUNITY LIFE	241
LIII.	MARRIAGE	244
LIV.	CHILDHOOD	251
LV.	SCHOOL TRAINING	258
LVI.	EDUCATION BY CONTACT	265
LVII.	THE PRINTED PAGE	271
LVIII.	INFLUENCES OF TRAVEL	278
LIX.	COMMERCE ANE INDUSTRIES	285
LX.	THE CITY AND THE COUNTRY	291
LXI.	POLITICAL FORCES	299
LXII.	THE CHURCH AS A SOCIOLOGICAL ORGANISM	306

THE GATHERED THREADS

LXIII.	THE COMPLETE MAN	317

INTRODUCTORY

CHAPTER I

"KNOW THYSELF"

Pope has said, "The proper study of mankind is man." The theme is the most comprehensive of all themes of study next to that of the Supreme Being. Because of his exalted nature God has "given him dominion over the works of his hands." Such distinguished honor conferred by the Creator, who cannot make a mistake in judgment, would naturally turn our attention to the powers of him who is thus "crowned with glory and honor."

In the few thousands of years in which man has been an inhabitant of the earth he has wrought out diverse and marvellous results. History is a record of his deeds. He has displayed irrepressible energy of action. Possessing a social nature communities have come into being, governments organized, laws enacted, and the boundaries of nations prescribed. Restless and ambitious he has waged wars, blood has flowed like water, national rights have been both defended and trampled under foot. Centres of civil and military authority have been established and then swept

away by the strong arm of power. Different forms of civilization have arisen and been supplanted by something that was new. The face of the earth has been transformed by art which man has developed. The forests have been levelled, the soil cultivated for the production of food, cities built, railroads devised and operated, steamships constructed, oceans navigated, commerce opened between widely separated countries, and the desert literally made to blossom as the rose.

Man has penetrated to the very heart of nature, and unearthed the secrets she had hidden away since the dawn of creation. Science is his reading of the great systems of truth God has ordained. To him "the heavens declare the glory of God, and the firmament showeth His handiwork." He has found out what God has been thinking about, for he has traced His handwriting on the earth and sky. He has justified the declaration that in powers of thought he was made in the divine image. He has gone farther than this even, he has scaled the battlements of time and caught visions of a future world. Reason tells him there is an immortality of being, that life here, even in its fullest measure, is incomplete, and that it points to a sublime destiny in an eternal hereafter. A being possessed of such powers, penetrating so deeply into the constitution of things, working out such a wonderful history, cherishing such sublime hopes presents to us in his nature a subject for study

which must be attractive, and in the highest degree instructive.

And the importance, the interest of this subject to the student of human nature is that it is personal, that he who studies the race is studying himself, and that he who is studying himself is studying the powers, ambitions, and fundamental principles on which all society is built, himself the microcosm making known the macrocosm. Knowing himself he knows the great world, the human universe. The extent and the certitude of his knowledge depend on the extent and reliability of the powers of knowing. Knowledge is the measure of the applied capability of knowing. The student studies the life of himself, by virtue of which life he is a student. And knowing, he seeks to understand how he knows; feeling, the laws of feeling; doing, the conditions of personal activity. The result is that he is intelligent as to himself; self is no longer a mysterious energy, an unread book. Understanding his powers he knows what he can do; understanding the laws of action of his faculties he sees how to proceed; looking forward to a future he is able to determine its degree of rationality.

Finding also the laws of progress he is able to make progress. He sees how the growth of energies may be intelligently carried forward. The supreme interest of life is its development, to become what we are capable of becoming; to secure

as large a measure of the human as it is possible to gain. We need to know the order and work of man-building if we would rear the most perfect temple of life. He who remains a riddle to himself when the solution is within his reach is unwise.

CHAPTER II

MAN'S DUALISTIC NATURE

No conception of man is complete or adequate which does not recognize his dualistic nature. In the human person there is both mind and body. Our entire ignorance of the condition and life of a disembodied spirit renders it impossible to predicate any reliable statement in regard to the facts, or the action of spiritual forces, in a state wholly dissevered from material realities. Not doubting that the soul has a future when the body, as we here know it, is laid aside, yet it is our purpose to consider the human being as existing in and subject to the relations we sustain in this world.

God has created two dissimilar primary substances, matter and spirit. Matter, subject to innumerable forms of combination, is made known to us by its properties; spirit is revealed by its attributes. Matter has spatial dimensions—length, breadth, and thickness; spirit does not possess

spatial magnitude, but manifests intensive energy —energy of knowing, feeling, willing. But in putting man as a spirit on the earth the Creator linked him with the material universe by means of a physical—a physiological or organic—nature. The body is the house the spirit occupies; more than this, it is an instrument the spirit uses in performing its functions; further still, it reacts on the spirit or unites with it in bringing mental products or states into existence. While it would be irrational to hold that brain is mind, yet mental action depends on the brain. The absence or derangement of the gray matter of the brain destroys or impairs the action of the mind.

To be more specific, the body performs four offices in its relations with the human spirit.

1st. The brain localizes the spirit, securing for it a definite position in space for the exercise of its energies.

2d. The brain is a medium of mental action, a material organism co-operating with spirit in bringing mental products into existence.

3d. The body is the servant of the mind which controls this physiological structure in the performance of its various offices through the brain and general nervous system.

4th. The soul or spirit gains a knowledge of material objects through sight, hearing, touch, and the other senses, all of which depend on the brain as an innervating nervous centre, and through this

nervous organism the mind is impressed, stimulated, and becomes intelligent.

The word soul, as we use the term, does not mean simply spirit, but embodied spirit, or spirit that has been embodied. We do not call angels souls because we do not know that they have a physical organization. The life they live is not supposed to depend upon or to be connected with any material structure. God we know to be pure spirit, and as such we speak of Him and worship Him.

We do not base our belief in the dualistic nature of man on our ability to solve the problem of such a nature, but on the diverse powers and manifestations of our life. The body is an object of sense, like all material things, but we are conscious of thoughts, feelings, volitions; of hopes, fears, love, hatred—innumerable products of our life—which can nowhere be traced in nature as properties of matter. The mode of union of soul and body is certainly a mystery which, probably, we will never be able to unravel. Our inability to find the link by which soul and body are united does not make the fact of such unity, in any degree, uncertain. In everything, when we come to the last analysis, there is mystery. How the animal body in its nutrition and growth tears the compounds which comprise its food in pieces, and builds up its muscles, bones, and nerves no one can tell. How the plant constructs woody fibre out of the gases of

the air and the earthy material of the soil, science is unable to make known to us. How light wings its way through space and pictures on the retina of the eye an image of the object from which it emanates is inscrutable to the keenest intellect.

The materialist, who affirms that man is wholly a material being, makes a monstrous assumption in putting mental powers and products among the forces and properties of matter. He takes a tremendous leap from that which is known in the physical world to that which is nowhere determined in material things, and sets at naught all principles of inductive logic. Underneath his inferences there are no premises. And, again, the idealist who discards matter, making the body and all other manifestations of what we call matter, to be only an outer form of the mental life—spirit the only substance and matter simply phenomenal —not only insults our senses but undermines all physical science. Idealism, like materialism, is a bald assumption, a speculative theory outside of the field of both psychological and physical investigations. In the life and activities of man we find two wholly unlike classes of powers and products which can be accounted for only on the ground of a dualistic nature. With the fundamental philosophy of the action of the two we have nothing to do; we must content ourselves with the facts of bodily structure and mental powers clearly determined, the mode of interaction being beyond the reach of

all investigation. The origin of both parts of this dualistic nature is synchronous in the inception and birth of the human child.

CHAPTER III

THE BODY A SERVANT OF THE MIND

THE content of the word manhood is found in the mental qualities of a human being, expressive of that which is high in rank, which is noble and worthy of admiration. The body is a servant of the mind: it not only reflects its spirit but it does its bidding. It shares with the mind that which is pure or impure; it carries out the edicts of the will, responding to the desires of the heart; and though a servant, it reacts on the inner life to enslave it or else liberate it from the sway of the passions. The actual man has physical powers and animal impulses from which his manhood cannot be severed.

The body is a structure of varied capabilities and wonderful adaptations. It contains a system of bones which give form and rigidity, and articulated so as, without the sacrifice of strength, to secure flexibility. The bones are covered with muscles, thus providing for both action and locomotion. There is a nervous system of which the

brain and spinal cord are the centre, from which come the stimulus to action, the power of healthy nutrition, and in sensations connecting the mind with the various parts of this composite structure. There is a digestive apparatus for the conversion of the food into blood. The body has a circulatory system, of arteries and veins, with the heart as an engine to pump the blood into the lungs, and then, on its return, to send it to every bone, fibre, nerve, and membrane of the body, for nutrition and life. It is supplied with a respiratory system for purification of the blood by the action of the air. It possesses provision for innumerable functions having to do with the prolongation of life and the healthy and efficient action of this complex physiological unit.

It is furnished with a distinct system of nerves whose purpose is to convey the mandates of the mind for such efforts as the mental being requires. Thus the hand, the arm, the foot, the eye, and nearly every part of our physical structure is forced into service to meet the plans and needs of daily life. There are nerves also which prompt movements for our good without waiting for an order from the mind—acting under an innate impulse—in the presence of sudden danger. It does not require an effort or command to wink when some object is thrust toward the eye. We shrink or recoil from danger when surprised by its sudden near approach. This is done before the mind has time to

make a definite plan of escape, yet this instinctive action rests back on a mental apprehension of impending harm.

That the body was planned for the realization of important offices in the career of each human being is evident, for illustration, from the structure of the hand. Its position at the outer extremity of the arm; its flexibility; the shape, relative size, numerous bones and direction of movement of the fingers; the sensitiveness of the finger-tips; the opposite position and co-operative functions of the thumb and fingers; the existence of the palm into which the thumb and fingers can be closed, all of this in agreement with the movement of the forearm, attached to the upper arm by a hinge-joint, which upper arm is connected with the body at the shoulder by a ball-and-socket joint, thus providing for the hand a large sweep of motion, with both flexibility and strength, and within the gaze of the organs of vision, so that, through structure and position, there can be intelligent employment of a most extraordinary instrument for mechanical operations, in this we find an appliance of marvellous range of uses and perfection of powers. Because of his mental capabilities man has such a hand. The animal could not use it, therefore he has not been supplied with it.

As an artisan, man needed an erect form. Where instruments are used, even on the lowest plane of physical activity, this is necessary. Could the

animal invent appliances of industry it could not employ them to any advantage. How would it handle the axe in felling trees; the jack-plane in smoothing the wood; the hammer in constructing a building; the hoe in cultivating corn; the trowel in plastering a room? And were man a quadruped, bowed down to the earth, not only would his dignity be lowered but his capabilities greatly lessened. He is made erect because he is a man.

While the mind can be trained, it is also true that the body can be educated. It is susceptible to influences good and bad. What we call skill in the arts consists of muscles and nerves trained to respond to some mental ideal. A habit is a facility of doing in some particular way, amounting to a tendency. This tendency may be not only mental but physical. The nerves act most fully in the direction in which they have before been employed. The muscles come under the same law. This gives a potency and efficiency to bodily activity which it would not otherwise possess. For the largest and best achievements in life there should be engendered physical habits which are decided and imperious, and in the direction of that which is consonant with intelligent and moral manhood. Man is successful just in proportion to the natural and vigorous movement of his activities along well-established lines for the accomplishment of the best results. The education of the body is necessary for its largest service.

CHAPTER IV

THE BODY AN INSTRUMENT OF KNOWLEDGE

The nervous system is a medium of communication of mind with the external world. There is no other channel for this association. Supposing mental energies to be in existence, it is believed they would be wholly inactive without the brain; and even with the brain there would be no knowledge of outer material objects in the absence of certain brain-fibres with which the body is supplied. These fibres perform a variety of offices, and introduce us to nature in a variety of ways.

1st. There are nerve-filaments in great number which terminate in the skin. By means of these we become aware of the existence and presence of material objects, through sensations of pressure and temperature. Many qualities of outward things are thus revealed to us, such as smoothness, roughness, hardness, etc., in various degrees. We have sensations of temperature for which "heat spots" and "cold spots" have definite locations in the skin. Through these nerves we are supplied with information of value to us in ways without number.

2d. Analogous to the above, but with special development and wider range of use, the tips of

the fingers are exceedingly sensitive as instruments of touch. From the number of joints in the fingers and the freedom of local movements, together with the sweep of the arms these nerves of touch are capable of rendering very important service in our daily experience.

3d. The olfactory nerves, which terminate in the lining membrane of the nostrils, are adapted to reveal the presence and quality of gaseous or volatile substances. Through these nerves we have the sense of smell, which, while not very greatly educative and rather restricted in its field of service, yet both for protection against that which is hurtful, and, at times, a source of real enjoyment, imparts knowledge we could not otherwise acquire.

4th. There are gustatory nerves terminating in the tongue and soft palate by which we have the sense of taste. Taste is possible only as the substance is or becomes liquid. That which is wholly insoluble is tasteless. Taste is not always a simple sensation, but commonly is modified somewhat by pressure and smell, the relative proportion of the three being not clearly discriminated.

5th. The organ of hearing is the ear, the outer portion being so constructed as to gather vibrations of the air, which vibrations are transmitted to what is called the auditory nerve, which carries them to the brain. This nerve is sensitive to vibrations when they are not less than sixteen nor more than 36,000 in a second of time. Between

these extremes sounds are produced of every grade of pitch and effect on the sense of hearing.

The value of the ear as an instrument of knowledge can scarcely be overestimated. The objects of cognition in touch, taste, and smell must be in immediate contact with portions of the body. Hearing, however, operates through a wide range of space. It greatly enlarges our world of experience. It increases our joys and adds to our efficiency in every domain of activity. It creates the human voice; it converts the vibrations of the stringed instrument into music; it fills the great organ with praise to the mighty Ruler of all things. It breathes accents of love, and awakens tones which bespeak the majesty of the human will. For, be it remembered, that where there is no ear there is no music, no sound, soft or loud. The vibrations of the air are not hearing, they have no harmony, only as the ear catches them up and carries the impressions received to the brain, there stirring the soul.

6th. Through the sense of sight, the mind has its broadest field of knowledge. The eye is the soul's most perfect window, as it seeks to scan this outer world as a wonderful mechanism, and in its interdependent movements. The scientist tells us that through all interstellar space there is an ether connecting these worlds together. Whatever other office it may fill, it renders a most astonishing service as a medium of light. The

learned world agree in this, that what we call light is a result of sensations produced by certain vibrations in this ether, coming in contact with a special nerve in the eye, which communicates with the brain. When this is set in motion at the rate of 18,000,000 of vibrations per second, impinging on the nerves of temperature, we get a sensation of heat. But to secure a sensation of light through the optic nerve, the ether must have a vibration, at the lowest, of 462,000,000,000 a second, ranging up to 773,000,000,000, which is the outer limit of color. Below the former and above the latter darkness prevails. For each color there is a special rate of vibrations, the lowest giving red, the highest violet. As these streams of light enter the eye, they converge to a focus on the retina, affording the sensation of sight. If the eye is in a healthy state an image is formed on the retina sufficiently intense to make the object from which the light emanates visible, provided enough light has passed through the pupil for this purpose. The problem is twofold, focalization and intensity. Nearness of the object is an element in the problem only as it bears on these two conditions. The telescope brings stars into view, by collecting the light, which, without it, would not enter the eye. It is on the same principle the microscope operates.

Thus we do not need to wing our flight from world to world, to peer into the chambers of this

great universe. This we could not do, should we desire it; but God opens the eyes of the soul through this marvellous mechanism of vision, and we stand face to face with far-off spheres. All nature is aglow because the mind translates these vibrations of ether into pictures which tell of God's wondrous works. As there is no sound without an auditory nerve, so there is no light without the optic nerve, with the brain and mind. The soul through this nervous mechanism lights up the stars, drives darkness from the face of nature, and fills the world with beauty. Without the eye there are vibrations but not light.

It is apparent, without further discussion, that the body is endowed with special organs, by which it puts the soul in direct relation with outer realities, supplying conditions of knowledge and mental greatness. This material frame is not to be despised, for in association with it alone can man be great and find the Infinite through His works.

PART FIRST

PSYCHOLOGICAL

CHAPTER V

ANALYSIS OF MENTAL LIFE

A MENTAL faculty is a mode of energy. The mind is not a collection of faculties as distinct entities, but rather a mental unit capable of many and diverse forms of action. Unlike the body, which is made up of parts each having a special office, the unity consisting of an aggregation of these separable parts, the substance of mind is simple—it is single in its entity, but multiform in its powers. And it is rarely, if ever, true that one form of energy exists alone; modes mingle and coalesce; there is coaction, and the products of these modes are composite.

The most general division of mind is into Intellect, Sensibilities, and Will. The functions of these powers as appearing in the products of their action are respectively Knowing, Feeling, and Willing. In this place we characterize them simply in a general way, reserving the analytical discussion of them for chapters that will follow.

The action of the intellect is fourfold. To know is not always to put forth the same energy.

1st. In its simplest form, knowing is to discern some object that is present within the reach or apprehension of one or more of the senses, such as touch, taste, or sight. This is direct, and the most elementary of all forms of cognition. The mind is also able to look within itself, and find its thoughts, feelings, and volitions; to know that it is thinking, to see its thoughts; to know that it is feeling, to discern the quality of its emotions, whether pleasurable or painful; to find its volitions and apprehend their character, the nature of the choice the mind is making.

2d. The mind is able to represent to itself objects and events as known and discerned in the past—in memory recalling that which has been previously experienced, and just as it transpired; or in imagination taking up the past more or less modified in the mental image formed. By virtue of this power the treasures of knowledge are preserved, and acquisitions do not perish as soon as gained.

3d. The mind is capable of perceiving not only objects, but the relations existing between objects through resemblance and difference, thus putting the content of our perceptions into classes, unifying knowledge. As the result of this, language is made more comprehensive and significant, and the world of thought is organized. The groundwork is thus laid for reasoning, premises are supplied for inferences, and knowledge becomes extended.

This is not the work of the senses; it is more than a perception of things or a recall of the past; it is the understanding of things in their dependence, co-operation, and causation, the part each reality plays in the world of matter or mind. As a result of this society becomes a possibility, opportunities are opened before us, responsibilities come into existence, duties press upon us, rights are created, government has a field for action, rewards may be given and punishments inflicted, the human race is made capable of advancement so that it can fulfil a sublime destiny.

4th. There is still another faculty of cognition which, in our enumeration, completes the sum of intellectual powers—it is that of the reason, or intuitions. By this faculty we do not perceive individual objects through the outer or inner sense; we do not recall past cognitions; we do not carry forward a process of reasoning; we do not draw conclusions, but we discover first principles, realities fundamental to all perceptions and reasoning. When an event occurs the mind in its very nature knows there must be a cause for such event; when there are properties, it knows there must be substance possessing these properties; when there are thoughts, it knows there is a thinker; if there be a creation, there must be a Creator. To deny such underlying principles would be an absurdity. It is unthinkable that there can be a product without a producing energy; that there can be phenomena

without a force in action; that there can be body without space; that there can be events without time. These are implied truths, and they cannot be conceived to be non-existent. The mind finds fundamental principles as the basis of all that is built or constituted. That which is dependent must have support. These are not inferences of thought, but an underlying necessity in being and thought.

Along with knowing comes feeling—an interest, more or less marked, in the object of knowledge, pleasurable emotions in view of the good perceived, painful emotions when evil or harm is apprehended. In the entire absence of cognition, emotions could not arise; with cognition they cannot be wholly prevented. They are both a product of knowledge and a stimulus to the gaining of knowledge. Were our cognitions absolutely colorless, without interest to us, no awakening of hope or fear, pleasurable reminiscences or anticipations, or painful experiences—an utter indifference—the intellect would slumber in non-action.

The sensibility also arouses the will to action. No choice is ever made when the sensibility is absolutely quiescent, when it is at the zero point. There must be a feeling of right as well as a judgment of right, a feeling of expediency as well as a conception of expediency, in order to stir the will to choose and do. With both cognition and feeling at the threshold of the will—illumination and

aroused interest—the conditions are supplied for choice and execution.

By means of the intellect we know, by means of the sensibility we feel, and by means of the will we choose; and in their co-operative action there is the movement and experience of man's mental life.

CHAPTER VI

MENTAL POTENTIALITY

To speak of a new-born child as being able to think, or even to know, is to utter an absurdity. Knowledge is a product of the discriminating action of intellectual faculties, and thinking is the employment of these faculties on some object or objects of attention. In the beginning of its life the child is wholly destitute of any mental acquisitions, and to get knowledge there must be differentiated operations of the energies of mind. A nervous impression from a physical environment, through the eye or ear, the sense of taste or the skin, is not knowledge and does not depend on thought, but it does and must precede thought. In saying this we are not to be understood as affirming the absence of mental susceptibilities. The child does not begin its life on the earth as a non-entity, but as an undeveloped entity. In its future

there is growth, but growth does not originate being, it unfolds it.

Every individual begins existence as a mental potentiality possessing special and definite elements of capability. In potentiality are involved the extent and range of the powers of manhood, the relative strength of the powers, the nature and quantum of intellectual ability that can be wrought out, the peculiarities and traits that will make the personality of the grown-up man or woman.

In this we have the manifestation of a law which bears universal sway in the organic world. The germ of the wheat determines the character of the plant which will spring from it as to its place in the class of cereals, and even its variety. This principle holds throughout the entire vegetable kingdom. Paul in his illustration of a great truth refers to this law when he says, "God giveth to every seed its own body." Through the whole animal world there is the transmission of being on the lines of ancestry, even extending to instinct and traits of the inner life. The lion, the tiger, and the hyena come into the world with a savage nature. Not only are some animals physically carnivorous and others herbivorous, but there is a radical mental difference appearing at the very threshold of their existence, belonging to their nature from the beginning. In the origin of the human being there is provided not only the structure of the body as to its size, the color of the eyes

and hair, the features of the face and every characteristic by which the person will be physically distinguished from others, but innumerable mental peculiarities comprising a distinct individuality, all of this preparatory to the development of the child, and indeed establishing the lines on which the child will develop. It is said that "poets are born, not made;" that oratory is a soul-power in existence before culture is gained or rhythm learned; that the true painter before he handles a brush possesses within himself a gift and spirit which push him out into a world of beauty. Some persons are born to be mathematicians, others linguists, and others to be masters in the world of science or of art.

Not only is it true that a human soul is human as distinguished from the lower animal world, but that individuals start in infancy with unlike tendencies and unequal mental energies; that there is a mental variety from the inception of life. The embryonic Webster was not the same as the embryonic Shakespeare; the normal development of native powers carried them on to an unlike destiny. Ulysses S. Grant was not born an orator, nor Demosthenes to be a great soldier; but each possessed diverse mental qualities of a high order.

The life each is fitted to live is settled before birth, but the life that each does live is mostly a matter of choice in after years. There is not absolute sameness of powers, but much less inequal-

ity in our mental outfit than the actual career of different persons would seem to indicate. All cannot be great logicians, or distinguished artists, profound mathematicians, or successful inventors, but each is supplied with native talents up to a higher plane than is now usually occupied. The greatest of all industries is the making of men, to strengthen, ennoble, and render mighty the race of human intelligences. The problem is twofold—of spirit and mode of procedure. A large percentage of the people aspire to nothing higher than the low plane of ordinary mental experience. To obtain the means of livelihood, or, somewhat more aspiring, to gain wealth, is the sole aim of their ambition. To them money is more than manhood. If our young people could be made to understand the relative values of the various objects of pursuit more would be accomplished. Blindness must give way to sight. The rational mode of procedure must depend on a knowledge of the faculties of the mind and the most effective condition for their employment. To bring out these facts and truths is the special aim of the present treatise. That which is provided for in our potentiality should be reached in the experience of each individual. How does mind grow, and how can it be brought to realize the true and sublime purpose of its creation?

CHAPTER VII

PASSING FROM THE POTENTIAL TO THE ACTUAL

The child begins life in the midst of innumerable objects of sense. Its environment is wholly physical, nothing touches its being but that which is material in its nature. Mentally it dwells in fog-land. Light forms images on the retina; the vibrations of the air act upon the auditory nerve; the gustatory and olfactory nerves are stimulated; the hand of the mother presses upon the body; hunger impels to the taking of food; there is, it may be, the pricking of a pin or some other cause of pain; the hands and feet in moving come in contact with material objects; day and night alternate, and sounds vary in their quality and intensity. Thus there is constant variety in the states through which the child passes. These are conditions antecedent to knowledge, but of themselves they do not constitute knowledge, and the infantile mind is not capable of drawing knowledge from them. Sensations are awakened which differ radically from each other, they crowd in upon the spirit but do not suggest the objects or causes which have produced them. The sensations are not even appreciated as differing one from the other.

Gradually, however, as these sensations are repeated through the weeks and months, there is developed the power of discrimination. The bright picture makes an appreciably different impression from the hurt the foot receives; music stirs in a way unlike the hunger that craves satisfaction. The fog that had enveloped the intellect thins out; differences which have been but dimly apprehended become more marked until objects are distinctly perceived in the action of the several senses. This is the beginning of knowledge. When the mental differentiation has become complete, the ability to think has made its appearance.

Infancy is utter mental weakness. With eyes, at the early stage, the child intellectually does not see; with ears, it does not hear; with brains, it does not know or think until power is developed through contact, in innumerable ways and for a period of time, with material things. Were it not for the body with its various organs and its system of nerves, and the outer world as a material structure, existing in innumerable forms and appearing in phenomena in countless variety, there would be no mental development, the spirit would never gain the power of discrimination. But it does not follow from this that the mind in learning is restricted to objects of sense, only that sense opens to us the world of knowledge which could not otherwise be penetrated, and in our future study it will be seen that, with this beginning, truth

may be found also far out beyond the realm of sense.

The child gains some apprehension of external realities before there is any conception of self. He looks at his hands and feet before gaining the notion of selfhood—before conceiving of these hands and feet as belonging to himself. But the daily happenings in his life—as the impinging of objects against the skin, especially if sufficiently violent to cause pain—contribute to the development of a realization of self. In the various activities of the body there is ground for such suggestion. The twofoldness of bodily sensations also helps him to make the discrimination between self and the things that are about him. In the handling of a ball or a block there is a sensation of feeling in the hand; in the squeezing of his foot by the hand there is a sensation in both the hand and foot. Various bodily processes are carried forward with dawning intelligence until the child knows himself as a living, feeling, self-acting being, and after a little he gains notions of personal ownership, of rights, duties, and of many other interests of his individual existence.

When consciousness has been fully established so that there is a sharp discrimination between the *me* and the *not-me*, and the child looks upon himself as a being separate from others—a person in the midst of objects external to himself, the stage of reliable knowledge has been gained, and

thinking has now begun. Memory does not reach beyond this point, and, ordinarily but dimly recalls these early experiences. When knowledge becomes organized and thinking is carried forward on distinct and sharp lines, the impressions in the mind are so well defined as to persist through the years that follow.

CHAPTER VIII

THE LIGHT OF CONSCIOUSNESS

THERE are times, as, for instance, in profound sleep, when the mind is in a state of utter obliviousness, when it does not realize its own existence or the existence of any physical or mental realty. We speak of it as being unconscious. Consciousness is a state of awareness, the mind apprehending, being alive to its own operations—of knowing, feeling, willing—a realization of that which is transpiring.

Consciousness is knowledge. 1. It is a gazing upon, a recognition of the states of the soul. 2. It is a recognition of the ego to which these states belong. 3. There is a recognition of the object giving rise to such states. That is, the mind knows itself as knowing, it realizes what it is that it knows, and it is aware of the objects to which its

mental states relate—which are the occasion of these states. It is conscious of sight, of itself as seeing, and of the object to which sight is directed. It beholds itself as stirred by emotions and discerns in the same act that which causes these emotions. It discovers the purposes formed as formed by self and in relation to the subject on which they are based. Etymologically the term consciousness comes from the compound Latin word *conscientia*, (*con*—with, *scientia*—knowledge), meaning joint knowledge, synthetic knowledge. "Knowledge of one thing or object in connection or relation with another." That is, it includes the *ego* that thinks, the state of the *ego* as thinking, and that upon which the thought is employed.

Consciousness does not originate knowledge but discerns and recognizes it when originated. That which we learn comes into view in and by the learning of it. It is a power surely, for it is distinct from the energy which gives rise to the knowledge. It does not create the content of the mind, but sees and knows it, and therefore it must be a mental force. It does not tell us how we have discovered the truth or the opinions formed, but it is an awareness of what the opinions are.

It must be conceded that consciousness is reliable in certifying to the fact of opinions or views held, though the reasoning in forming such opinions or ideas may be unreliable. Consciousness is not a logician, but a sharp and infallible ob-

server. It must not be made responsible for our theories or systems of thought, it can only assert that they exist and tell us what they are. It is an unimpeachable witness as to a mental fact but says nothing as to the correctness of the grounds of the alleged fact. We cannot deny the certification of consciousness: this is beyond dispute. When it beholds joy or sorrow the emotion exists; when it affirms hope or despair as filling the soul it does not and cannot make a mistake. Our reasoning may be at fault but consciousness never.

But it must be remembered that we can gain no knowledge whatever in the absence of consciousness. Knowledge cannot be brought into existence and kept out of sight; it cannot be elaborated in unilluminated chambers of the soul; in coming to be it does and must make itself known.

But while the foregoing statement is true it must not be supposed that knowledge remains continuously in consciousness. While it can never be unconsciously acquired, it may afterward pass out of sight. The greater part of knowledge at any moment of time is not directly within our view, though not lost. Hamilton says, "I know a science or language, not merely while I make a temporary use of it, but inasmuch as I can apply it when and how I will. Thus the infinitely greater part of our spiritual treasures lies always beyond the sphere of consciousness, hid in the obscure recesses of the mind." This is sometimes designated poten-

tial knowledge in distinction from the actual or immediate. Consciousness takes cognizance only of that which is here and now present to the eye of the mind.

The wisdom of this law of life by which the conscious passes into the unconscious is worthy of special notice. Were the mind constantly occupied with all it has ever seen, felt, or planned, the whole past being always in view, progress would soon come to an end. It cannot sharply spread its gaze over a multiplicity of objects at the same time. It becomes less distinct as the view widens. By fixing the mind on a limited field of observation the vision performs effective work, additions are made to the repertory of thought, and the soul becomes rich by this accumulation of treasures.

Consciousness exists in varying degrees of clearness. This depends on the vigor and intensity of action of the mental life. When the mind is sluggish and weak in its movements, and inappreciative in its spirit, the work is sure to be but poorly done. The knowledge gained is not sharply defined, and consequently the consciousness of the same is correspondingly dull. Along with a sleepy intellect there will be sure to go a consciousness that is dim.

As consciousness must be developed, the child begins its life without its illumination because of the absence of ability to formulate knowledge. As it gains the ability to differentiate and classify, and

hence to recognize thinking and other mental experiences, these operations stand out with sufficient clearness to engage the attention. The intellect cannot see unless there is something to be seen. When the child has a content of knowledge in his experiences he becomes aware of it. That which is most distinctly wrought in the soul is most vividly there. Hence consciousness is a gauge of the activities of our mental life.

CHAPTER IX

THE PHILOSOPHY OF ATTENTION

The mind does not passively gain knowledge. It is not like the wax receiving impressions from the seal. It is not a reservoir into which knowledge flows. It is not a receiver, but a producer. It creates knowledge, which is an apprehension and interpretation of realities on which the mind employs its powers.

The dawning of intelligence is seen in and takes place through an awakened attention. Attention is involved in consciousness. To have knowledge and perceive what that knowledge is, is possible only when the gaze is turned on some object. To be awake, therefore, to realize our surroundings, to pass through any form of experience is to dwell in

an observant state, a state of attention. This is a statement of a fundamental law of intelligence. We call it primary attention because it is primary and universal in mental action—there could be no consciousness without it. It is thus mind touches nature and comes into relation with the great universe of possible knowledge. This may be designated involuntary attention because objects are not selected and chosen by the will, but, unbidden, obtrude themselves on our apprehension. It is a mental act that is necessarily present in every stage and form of cognition.

The mind does much more than apprehend, it discriminates and classifies. This cannot be done without attention, perceiving qualities, and through resemblances and differences constructing complex units out of the multiplicity of particulars. In this there is a selective act, the field is narrowed, the powers of cognition are restricted by being employed on the elements by which classification is effected. And in proportion to the concentration of mental energies, there is clearness of understanding and accumulation of power. This is more than contraction, a withdrawal of attention from the general field of knowledge; such withdrawal takes place in inattention; it is rather a withdrawal from the many to concentrate on the few. It is the bringing of the energies of the mind to bear on a restricted field to the exclusion of the irrelevant. Nothing is more feeble than abstrac-

tion without concentration—a letting go of all objects of thought. That which is needed is intense intellectual gaze secured by the focusing of thought. This can be done only by the action of the will in what we call voluntary attention.

We speak of attention as the keeping of the mind from wandering, holding it steadily to the subject under consideration. But we do not mean by this a fixed, immobile gaze; that might exist with but little mental activity. We should not sit down by a theme, but work on it, keeping, however, all that is foreign out of sight. Every subject is complex, a compound with many relations. To give rational attention is to study it in its fulness; analyzing it; turning it over on every side; making it, for the time being, the sole object of interest; excluding everything that would interrupt or weaken these efforts. Attention, therefore, is mental application to a unit of thought narrower or broader according to the subject in hand. For this there is needed the ability to continue such work uninterruptedly till fully accomplished. There must be action, unity of action, force of action.

This application of energy underlies all vigorous and successful movements of the life. We have seen that knowledge depends upon it—is gained by means of it, and is made clear and comprehensive. Interest is also thus awakened. The more complete the view and the more vital the relations

unfolded, the more numerous are the points at which it touches our emotional life. We prize in proportion to perceived values, and we feel only as we perceive. The world of feeling is no greater or wider than the field of knowledge. Through all of this the will is reached, an inspiration to do takes hold upon us, and the range of our power of action is increased. The entire being is stirred and made more effective. Attention illuminates the mind; the clearer vision stirs the emotions; and the ardor of soul arouses the will, and thus the whole life is wrought up to mightier deeds.

CHAPTER X

THE TRAINING OF ATTENTION

Like every other mental force the attention can be trained by giving it vigorous and continuous action. Living in the midst of such a multiplicity of objects which constantly obtrude themselves on our notice, we are liable to dissipate all specific energy. When some particular subject calls for consideration there may be numberless occasions for diversion, so that the continuity of thinking is not infrequently interrupted, defeating, it may be, the purpose we have in view.

Training should begin in the early years of childhood. The novelty of the world into which the

child has come contributes to a vivid daily experience, but it is largely like a rapidly shifting panorama. The attention is quickly caught, but changes to some new scene. Nothing is more difficult than for the child to resist the inclination to let go of the present for that which follows it; and this is likely to keep him racing from morning to night along the pathway of the hours. There is needed a discipline of restraint, to do that which should be done—to stop to do it—notwithstanding the bright picture just in the future. The boy that excuses himself on the ground that he forgot the errand—not wilfulness but forgetfulness—displays the need of training.

The school-days of youth are usually less productive of good than they should be, because of unwise methods. For either the book or the teacher to do the whole work is robbing the child of power. It is worth immensely more for the boy to learn how to study one thing thoroughly, than to read a dozen things in a book. If to have the meaning of the text is all that is necessary, the translation by a friend or by a "pony" will answer the whole purpose. He who searches in order to find gets a hundred-fold more into the fibres of his mental life than the boy who accepts what is prepared for him either by his teacher or author, because he has evolved it by looking at it more steadily, and into it more deeply. He gains the habit and power of attention.

There is in our colleges a fault, that is almost universal, of sacrificing depth for superficial area—we do not say the sacrificing depth for breadth, for real breadth in scholarship is depth. Ground is too often travelled over in a hurried manner; the task is not learned, but glanced over, the surface is skimmed. There are two classes of subjects studied in our schools; one of these is pursued for the knowledge to be gained, the other for the mental discipline to be acquired. The benefit of the latter occurs not in the having but in the getting. The student is compelled to study so carefully, to dig down so deeply, to bend his energies to the work so continuously that there is a growth of power, he is gaining the ability to be a master in the great world of thought. But even in those branches which are specially informational, if pursued in a scholarly way there is ordinarily not less good to be derived in the training of the intellect than from the knowledge acquired.

The student's ideal is largely a false one. Education, as he conceives it, is knowledge. To him, in this is found a personal benefit, and hence in studying he thinks only of the knowledge to be gained. When he is examined it is to determine how much he knows. Theoretically discipline is taken into account, but practically it is lost sight of. It is not an end sought in every lesson. The student does not say to himself, "In what way can I get most discipline out of this lesson? I

will bend my mind to this work so as to sharpen my mental vision, intensify my mental gaze, and add to the power of close application." But he asks, "Do I understand this lesson? Can I recite this lesson?" The Freshman who does not learn with much greater facility the latter half of the year than the former half, is either very obtuse or has been at work in an unphilosophical way. The Senior should surpass the Freshman or Sophomore, not only in scholarship, but greatly in the power of gaining scholarship.

Much more than holding an examination on the text, there should be a testing of the power to gain knowledge and to comprehend the problems studied. The college curriculum does not provide for this, and the teacher in charge of a department gives ordinarily but little attention to it. This whole subject should have direct and efficient supervision. Exercises can be introduced in every part of the course for pure disciplinary effect. Nothing was more valuable in the public school years ago than the work in mental arithmetic. The problems, being made gradually more complex, held in the mind; and in the absence of all mechanical helps, solved by the child, created the need of increasing grasp of attention; and thus by practice, facility was gained for deeper and harder work, so that in a single term of a few months, a marked improvement would be observed in the handling of difficult problems. In recent years

the trend has been toward formulation of processes and away from intuitive operations. Our higher schools of learning should give us better thinkers by making a specialty of mental training, not stopping with the fact of the lesson being learned so as to be creditably well recited. Let the mind of the pupil be studied as well as the quality of the recitation determined. What has been learned should become known by the teacher; but how the student proceeds in gaining knowledge should also be investigated, and guidance afforded.

To secure a concentration of attention, awaken, if possible, an interest in the subject. This the wise teacher always seeks to accomplish. To call upon the pupil to give attention will usually create a temporary effect, but ordinarily it will only be temporary. The roots of attention are not reached. But the mind takes hold of and clings to that in which it feels a decided interest. This statement is of value both to the teacher and pupil. It contains a principle of universal application.

The will has in this a specific office to perform. It can and should rule the intellect. It is able to call in wandering thoughts and centre them on any special subject. It is ordained to hold the helm, and it should be trained to hold it firmly. Nothing more completely dissipates power than unchecked drifting of thought. While a feeling of interest draws the attention, the will should force it, when the occasion for its exercise arises. And

the more frequently and imperiously the will asserts its authority, and the more constant the effort to secure regularity of attention the more intense and effective will be the concentration of thought.

And greatness, masterful sweep of power, is in proportion to the massing of mental energies, and the steady, determined assault on fortifications we seek to capture.

CHAPTER XI

FIRST FORMS OF KNOWLEDGE

In Chapter V. it was stated that there are four distinct faculties of knowing, and therefore four forms or classes of knowledge. Writers designate the kind of knowledge we shall consider in this chapter as *Presentative.* It is not inferential knowledge; it is not representative; it is not implied, but it is perceptive. In the order of time the Presentative is the first that is gained by the mind. It is the simplest in its nature and requires the least mental effort. The objects to which this knowledge relates obtrude themselves on our attention, and when the mind is in a normal, active state they come into the field of view. This is knowledge that is obtained when the object is present and directly discerned.

Such knowledge is gained through the senses. It has been stated that there are five special senses—of touch, taste, smell, hearing, and sight, called special because each has a special organism, and a special office or mode of action peculiar to itself. In addition to these there is a muscular sense, reporting the condition of the muscles in their action, weariness, etc., their more or less fulness or depletion of energy; and an organic sense by which we become aware of the state of our organic life.

In order that through any of these channels knowledge may be gained of the material world sensations are produced. A sensation is a feeling awakened through stimulation of some sensory nerve, putting the mind cognitively in connection with the object then present. That sensations may arise there must be a material object, some nerve or nerves brought by it into a state of excitation, this excitation then transmitted to the brain, and the mind thereby consciously aroused. Thus on the physical side there must be nerves and brain acted upon by some material object. But with nothing more than this, sensations are not possible; that nerve excitation may pass into sensation there must be mind in a conscious state affected by the nervous stimulation. Without a mental recognition of nerve-stimulation there is no sensation. Sensation is a psychical action. It belongs to the mind, not to the nerves, though

the nervous system is necessary for the mental impression; and in the nerves the excitation of the life must take its rise.

In sensation, however, there is more or less distinct recognition of the nerve-endings through which the impression is received. As, for instance, in rubbing the finger-tips over a rough surface the mind becomes aware of the character of such surface by virtue of the impression made on the nerves of the fingers, and the excitation of these nerve-endings is revealed in the mental state thereby produced. In other words, the mind becomes aware of these two things, the disturbance of the local nerves and the character of the object affecting this disturbance. This really is perception, *the reading or interpretation of the sensation.* The sensation was mental, directing the mind to both of these objects to be perceived —the nerve and the object which acted upon the nerve.

In some sensations the physiological factor or medium is very prominent, as in touch, taste, and smell. In other sensations, as in sight, the physiological drops wholly out of view. There is no feeling in the eye, or referred to the eye, by an image forming on a healthy retina. In the process of seeing we are wholly unconscious of the existence of a retina. The retina was not discovered by our using the eye, but by dissection of the eye of a dead animal. In sight the retina responds

to the light without our being aware of any movement taking place. There is a sensation, or condition for perception, effected without any observed or felt physiological change. It should be borne in mind that the sense in which we use the word sensation is a mental feeling, or an awakened mental state produced by some stimulation of the nervous system by a physical object. The sensation is mental, the origin or exciting cause is physical.

Sensations differ widely in their nature, depending on the character of the organs through which they arise. We are able to discern as many classes of qualities existing in nature as there are kinds of sense-organs. We do not know whether the scope of our possible knowledge of the material world is limited by our sense-organs or that these organs report fully to us the constitution of nature. It may be that there are material qualities all about us unknown because we have no sense organs fitted to receive impressions from them. We do know that the sense-organs do not report all the activities of nature. The ear gathers no elements of sound when the number of vibrations of the air is below 16 or above 36,000 per second. The ether may at different times be in vibration all the way from a very slow to a very rapid rate, but as has before been said, we get no sensation of light below 462,000,000,000 or above 733,000,000,000 of vibrations per second. Outside of this range

it is the deepest midnight. The force of gravitation is transmitted from one world to another, probably, through interstellar ether, but we have no nerves that detect its constant flow.

The senses we possess are the windows through which the mind looks out on the material world. Nature presents herself to us as objects of cognition through this medium. How nerve-stimulation, when it reaches the cells of the brain, can be transferred to the mind no one is able to explain. It is a mystery, but no more a mystery than innumerable other facts clearly established. We know positively that perception of outward objects begins with the agitation of nerve-endings in touch, hearing, sight, etc., and ends with the discerning of the object that supplied the stimulus. The starting-point of the process we find, the track is determined and the outcome is known. Of all this we have as much certainty as though the mystery of the energy of transference was cleared away. Things and the knowledge of things belong to two different spheres. One is physical, the other mental. The latter is the reading or interpretation of the other. A sensation—painful or pleasurable—is not a thing, but a means or condition of knowing it, and perception is the finding and localizing of the object causing the sensation.

The first form of knowledge, then, is that which is gained through the senses. It is direct, immediate, simple so far as the action of the mind is

concerned, and of particular objects. We designate it presentative knowledge because the object perceived is present to sense.

CHAPTER XII

FIRST FORMS OF KNOWLEDGE—(*Continued*)

In using the word perception at this stage of our discussion we must restrict its meaning to knowledge that is characteristically presentative, such knowledge as is the natural and direct result of sensations. This is the entire significance of the act of perception with the little child; in maturer life the content of perception comes to be much broader and more complex. In these later years, in presentation there is mingled a large element of representation and reasoning, at least to the extent of classification. But these factors for the present will be ignored.

It is seldom that perception—the immediate knowledge of things through the senses—is based on a single class of sensations. In perceiving an orange, for illustration, distinguishing it from other objects, with which it might be confounded, the eye is used, through which we have a sensation of color and shape; there is also a sensation of form by handling the fruit. There is a sensa-

tion of the character of the surface by means of touch and pressure of the hand. The sense of smell is employed, and to complete our investigation we resort to taste. But from all of these sensations we perceive the object to be an orange. Is the flower at which you look an actual or paper rose? The eye alone may not be able to settle the question; you appeal also to the sensation of touch and smell. Is the figure that rises before you a person, or are you the victim of hallucination? To sight it seems to be a person, but you stretch forth your hand to touch it and find it wholly intangible.

The sensibilities and will both make contributions to the act of perception, to the extent of interest, at least on the part of the sensibilities, while the will directs and holds the attention, so that they enliven and give color to the perception. It is evident that crowding in on us from every side there are manifestations of the outer world appearing in our intellectual life, through the sensations awakened and which mingle in varying proportions.

Sensations depend upon the stimulus applied, but they are not in the precise ratio of the stimulus. Weber's law, which seems to be reliable, teaches that to secure an arithmetical variation of the sensations, the stimulus must vary geometrically. To obtain sensations represented by one, two, three, four, the stimulus must be one, four,

nine, sixteen. That is, in order that the sensation may be doubled in its intensity or degree, the stimulus must be quadrupled. To treble the sensation the stimulus must be increased ninefold. To double the sensation of sight the amount of light the object radiates or reflects must be augmented fourfold. The shriek of an engine rasps the auditory nerve only in the ratio of the square root of the sound emitted.

Sensations are relative also, they do not stand for fixed quantities. When the hand is thrust into water at 110 degrees, there is a sensation of heat, but if transferred from water at 150 degree to water at 110 degrees, there is a sensation of cold. One reason that special sounds can usually be heard more distinctly in the dead of night than in the daytime, is that in the general quiet of the night there are no mixed or counter waves to be overcome.

All sensations are phenomena, they are not the transference of qualities to the nerves through which sensations are perceived. Sweetness is not in the sugar, but it is a sensation developed locally by the action of sugar on the gustatory nerves of the mouth. These nerves cannot produce this sensation of sweetness alone, nor can the sensation be in the sugar, but as the result of the contact of the sugar with the nerves, the sensation comes into existence. Sweetness is not put into the mouth, but is developed in the mouth. There is no color in the absence of light. In a rayless

night the barn that was painted red is not red. The paint is capable of decomposing the light that falls on it, absorbing all except the red rays. The music is not in the violin, only waves or vibrations of air can be created, which vibrations produce certain sensations of musical sounds—in pitch and quality—by action on the auditory nerve.

Are our senses always reliable, or do they sometimes deceive us? Take phenomena like the following. A large man looks like a small boy, until you come to realize that instead of being twenty rods away he is half a mile from you. An object of but a few inches in front of the eye, but supposed to be several feet away, seems to be many times larger than it really is. Does the sense of sight in these cases make a false report? The apparent magnitude of an object depends upon the visual angle—the angle formed by lines drawn from the extreme points of the object to the centre of the eye. The greater the distance of the object the smaller the angle. The effect on the angle of vision by increasing the distance without change of size of the object, is the same as would be produced by reducing the size without change of distance. In this there is no deceit. Sense is accurate and does all it is planned to do. When the actual distance is understood and taken into account, with the additional sense determination of diminution of light because of distance, the

mind forms a correct judgment as to real magnitude. Perception is not sensation simply, but sensation on which judgment has been exercised. It is an act broadly intellectual.

Take another illustration. A straight stick partially and obliquely immersed in water, appears to be bent at the surface of the water. We may know positively that the stick is straight, but by no means can we make it look straight. Does not sense in such a case as this deceive us? It ought not to do so, if we understand certain laws of nature. When light passes obliquely from one medium into another of different density, it is always refracted from a straight line. Apparent position must depend on the direction from which the light enters the eye. That direction being changed at the surface of the water, the stick must necessarily appear bent. The eye is not at fault, the light has changed its course. On the same principle the disk of the sun is seen in the morning, a little time before it rises or is actually above the horizon, and a brief period at night, after it sinks below the horizon. The rays of the sun in coming into the atmosphere are bent downward. In the mirage a vessel appears inverted in the sky because of unequal degrees of refraction of light. Now as to position or direction of objects, the eye cannot trace the light beyond the organ through which sensations originate. It is not its function to go out into space and track the curving of the

light in changing the apparent position of the sun or moon or stars; to find the crossing of the rays through unequal refraction, so as to form the mirage; to extend its work to the surface of the water, to note the deviation from a straight line of the rays which find their way up into the air.

The senses do their own work accurately and well. They do not go out of their own spheres. In knowledge, however, there are elements which sense does not supply.

CHAPTER XIII

INTELLECTUAL TRAINING OF THE CHILD

The subject to be presented in this chapter is of the greatest practical importance. The child starts in life with an equipment of sense-organs. The first knowledge gained is perceptional. Other forms gradually make their way into the intellectual life, but in childhood sense-knowledge predominates, and through all our years it must be fundamental.

The natural order in mental training—there must be a natural order—should be observed. Before school-days arrive the child is in his native element. He is attracted by the various objects of the physical world; through sight and hearing,

taste, smell, and touch he comes to know and discriminate material things. Sensations crowd in upon his experience, and the range of his intelligence is constantly enlarging. There is no period in which more rapid progress is made. This ought not to stop when the child enters school; but until recent years the early school period was nearly a blank. It was a violent excision from the natural stock on which life had been grafted.

The kindergarten methods which are now being employed are eminently philosophical. In this the occupation of the child is in the world of the concrete—of actual material things. The play element is not aimless, but is turned toward material forms, in connection with which there is a disciplining of the powers of discrimination. The interest developed quickens the mental pulse, and in the aroused spirit of observation the immediate world in which the child is living comes to have a deeper significance. At first there is little the child can understand but things; it is too early for wide processes of reasoning, for handling abstract principles. Nothing is better for the child, from three to six or seven years of age, than the training and guidance in the kindergarten. It is living close to the world of sense.

When the child passes from the kindergarten to the general school-room, what then? Shall he turn his back on nature? Nothing could be more unwise. He has already gained something of an

equipment in and for the world of sense, and there is a wide field not as yet explored on which this equipment can be employed. We say, study things. There is more for the child in the rocks, the flowers, the trees, the lakes and rivers, the hills and the vales, the animal and vegetable kingdoms, in the growing crop, the mature seed, the works of art as seen by the eye and handled by the hands, than in the most perfect book man has ever written. In school-days children should be led up to nature to listen to her voice and catch her smile—not away from her as though the purpose of education was to sever the life from its natural connections, to divorce what God has sought to join in an eternal union.

There are two reasons for the theory we are urging. One is that the child is better prepared to study the world of things than any other of the classes of subjects that can be brought to his attention. It, indeed, is all he can do well. The other is that sensuous knowledge must underlie that which is abstract as it shall come into the life in subsequent years. Every child should be trained to be a careful observer. Observation is more than the keeping of the eyes open, a general recognition of one's physical environment. It is a mental state, a spirit of inquiry, analytic in making discriminations. It is not merely looking at things, but into things. The child should be trained to be a close inspector, gaining the habit

of rational scrutiny; his eyes should go down into the very depths of his soul. The telescope does not find the star, it is the man behind the telescope.

Educationally much of the work of childhood consists in learning the names of things and the meaning of the words which express acts or phenomena. The drill of the school-room, with nature carefully shut out from view, gives a very imperfect impression of the content of the words which are intended to express natural objects. The way to study language is to gain a familiarity with that of which it is an expression. If language-study should begin in childhood, as it certainly should, the words should not be a dim shadow of the real. This is necessary, not only to meet the demands of scholarship, but of general intelligence as well.

To the parent we would say, help the child to get into rational touch with nature in all the sports and amusements of the first years of its conscious being. We charge the teacher to take this great universe into his service in starting the education of the boy and girl. Get out of the powers of perception the work they are fitted to do. See to it that a foundation is laid for a wide sphere of investigation and thought, in attentive and discriminating study of the objects for which the senses are provided. To the student seeking scholarship we bring this exhortation: Develop the power

and gain the habit of a close and interested observer. Train the mind constantly, and with deepest interest, to search for truth through the senses with which you are fortunately endowed.

CHAPTER XIV

MENTAL GROWTH

MENTAL growth comprises enlargement of life as to powers, and knowledge gained by employment of powers. Knowledge acquired contributes to the energy of our cognitive faculties, and the greater the energy of these faculties the more rapidly and thoroughly will knowledge be gained. In mature years the body consumes food to repair waste; in childhood and youth the purpose is to promote growth as well as to repair the daily waste. Unlike the physical, the sole office of mental food is enlargement of mental life. The food which the plant takes from the air and soil is wrought into its structure and hence it grows; the extent of growth being in proportion to the amount of material thus utilized. If the same principle holds in the mental world, the acquisition of knowledge through all the years of the past should appear—the whole of it—in the intelligence and capability of to-day.

Mental effort is of value even should we fail to solve the problem on which we are employed. It is of more value, however, if in the effort the truth or solution we seek be reached. The speculations of the philosophers of the Middle Ages are of little worth as systems of thought, but the intellectual struggles for which they stood made some mighty men. Larger results followed when rational lines of study were pursued which led directly to the temple of truth. Civilization means most when knowledge is most fully developed in connection with the rational use of mental powers. Truth is needed as the furnishing of the intellectual life. We work with it and on it to gain more truth. Progress in scholarship depends on the scholarship already gained. Each truth captured lifts up to a higher level, enlarging the field of view. The gaining of knowledge because of the worth of knowledge, and the stimulation and more successful action of the powers, is progress.

If the knowledge gained to-day should fade away to-morrow, mental life would be at a standstill. The only condition of substantial improvement is the persistence of knowledge. Because of this we have scholarship, professional skill, intelligence from the lowest to the highest grade. Thus manhood means more than childhood, and life has a glorious mission.

That the mind holds on to its possessions everybody knows; how, is an inscrutable mystery. To

speak of knowledge as being stored away in the mind—in the mind but distinct from the mind—as wheat is stored in a bin, or letters deposited in a pigeon-hole, is to use a misleading figure of speech. Knowledge is not stored, it is incorporated. It enters into the flow of life, modifying mental action.

It is not unreasonable to hold, as the psychologists of to-day universally maintain, that the persistence of knowledge and of all mental impressions is due to a modification of brain-cells effected by the action of the mind in the gaining of knowledge and the creation of such impressions. As the mind depends on the brain for all its activity, this cannot be eliminated from the problem of thought. With a healthy brain there is normal mental action; with a diseased brain there is mental disorder. Insanity is a brain trouble, it can be cured only by a proper treatment of the nervous system. Softening of the brain is a breaking down of brain-cells, producing idiocy. All nervous disorders affect the mind. The dyspeptic is irritable despite efforts to restrain his temper. In nervous prostration the whole mental life is swayed by irritable nerves. Drafts on the brain are drafts on the mind as well. The orator under nervous excitement finds the mind stimulated and sharpened; when his effort is passed and the nervous system feels exhaustion, the mind for a time is almost incapable of effort. The mind of the

minister on Monday is often sluggish as a reaction from the nervous strain of the Sabbath. A boy with an irascible spirit, by repressing his tendency to nervous irritation, can gain a placid temper; but by giving unrestrained freedom to nervous excitement the habit of violent outbursts of passion becomes his master as the years go by.

Perception, which is psychical, may be modified by the training of the nerves. The Indian gains the ability, by frequently putting his ear to the ground, to hear the approaching footsteps of the enemy while still at a great distance. The blind man comes to have a sharper hearing and more sensitive touch because in the absence of sight he depends on these senses. Cases have existed in which the deaf have shown great appreciation of music through the sense of touch effected by placing the hands on the wooden furnishings of the room. The tactile nerves had taken the place of the auditory nerves.

Everything goes to show that the nervous system, with the brain as its sensory centre, has a most important part to perform in the gaining and utilization of mental experience. We see, therefore, that mental growth consists of an increase of knowledge, an enlargement and strengthening of mental faculties, and a modified and developing condition of the brain and nervous system for the more efficient action of the energies of the mind.

CHAPTER XV

SECOND FORMS OF KNOWLEDGE

(MEMORY)

MEMORY, to which we referred in the preceding chapter, is a faculty by which the past is brought back into consciousness. It consists of three stages or essential elements, *Retention*, *Reproduction*, and *Recognition*. We use the word retention to express the fact that that which is remembered has in some way remained in our mental life. Then there is reproduction, that which had been produced in perception but had passed out of consciousness, is reproduced, is brought back into consciousness. And that the act of memory be complete, that which is recalled or reproduced must be identified or recognized as standing for the original production as to fact, time, and place.

This form of mental action is properly designated representative in distinction from the presentative which we considered under the head of "first forms of knowledge." In the exercise of the representative faculty the subject to which the knowledge relates is not present either in time or place, it is not directly received through any of the senses. In representation, the knowledge is

not then created—not then primarily produced, but it is reproduced. In the experiences through which we daily pass our gaze is constantly shifting. That which is the object of attention one moment gives way to something else in the moment that follows. We walk in new fields and encounter new scenes, becoming oblivious to the days and years through which we have come.

Were all the past constantly retained in consciousness there would be mental confusion which would arrest progress. But if all the past of which we have become unconscious had been blotted out —escaped beyond recall—we would never rise above the feebleness of early childhood. And as we retain our hold on our past mental acquisitions, however broad the range of truth we have traversed, these being somehow stored in or attached to the mind so as to be called into use at will and employed as our needs require, we may and should become rich in mental treasures.

How does memory unfold? It will not be profitable in this connection to deal with the physiological or scientific speculations in which writers have indulged. Our statements will be valid whatever fundamental theories are adopted. Upon this, however, we must insist that the furnishings of the mind called education, whether existing as cognitions, feelings, or volitions, are not possessions simply held by the mind and which could be excluded from the mind without affecting its

integrity or capability. They are not a deposit in mind cavities but a constituent of mind texture.

It is evident there can be no action of memory when there has been no action of mind in first gaining knowledge. Very largely is it true that what is charged against the memory should rather be charged against the mind in its incomplete work in acquiring perceptional knowledge. We do not remember because we have not learned. What has not been in consciousness could not be brought into consciousness by an act of memory. We cannot recall unless we have had something to be recalled. The student cannot recite his lesson when he has not learned it. The memory does not take in the events of early childhood because such events were not fully understood; they did not completely become objects of knowledge. A thing is known not simply by impressing some sense, but by being discriminately perceived and put into the class of realities where it belongs. This does not occur to any large extent until the child is five or six years old. There is in the mind of the infant no class knowledge to which sensations can be referred. When the child has progressed so far as to have a body of discriminated perceptions—at least a groundwork of classification—objects or events apprehended have a meaning because of resemblance with that which had previously been distinguished. Gradually what was dim becomes clear, a stage is reached in which knowledge is

rounded out, and which therefore can be retained in memory. That which was clear in knowledge is clear in memory.

It is important to know that all sensations cannot be recalled with equal ease and clearness. It is much more difficult to reproduce sensations awakened by the sense of smell or of taste than of sight. Usually that which is seen by the eye is more fully represented than objects of any of the other senses. There are persons, however, who recall auditory images with special facility, the sound readily coming back into consciousness in its quality or timbre. The memory is auditory rather than visual.

Writers on psychology designate memory as perfect and imperfect, spontaneous, tenacious, verbal, philosophic, etc. These various types or conditions of memory have their groundwork farther back in the intellectual life. He who learns things imperfectly will remember imperfectly, while he who has a clear mental vision and has gained the habit of mastering objects of attention will possess what may be called a perfect memory. Individuals having tenacious memory are such as dwell on the subjects of knowledge or thought until they are incorporated into the mental life. A spontaneous memory, a quick-acting memory, has its basis in a mental constitution that is not sluggish in the work it does, but rapidly passes from one point to another in its intellectual activity. Those who have

great facility in committing words will most easily recall words, and should their studies not extend beyond the names or words learned it is certain that the memory will be quite distinctively verbal. With those endowed with philosophical memory the intelligence is philosophical. They see things as related in cause and effect or are otherwise linked together, so that when memory goes back to the fields traversed it reads into consciousness that which appeared in consciousness when the knowledge was gained.

Persons belonging to unlike professions will give different descriptions of places or scenes which they had visited, because, though they were equally wide awake, their attention became engaged according to the profession to which the life was devoted. The lawyer recalls one class of facts, the physician another, the scientist another, the statesman another. What we remember, how much we remember, is determined by the mental life we have been living.

The secret of a good memory is close discriminating attention in the gaining of knowledge. The memory can be trained by training the mind to acquire. The first forms of knowledge—the perceptional, the presentative—appear in the representative, and that only is representative, as we have before stated, which had existed in the presentative. Artificial methods of developing the memory are vicious, or if not vicious, they are

worthless. A resort to that which is artificial is, at least, a waste of time and energy. The fullest provision for a reliable memory is made in the regular action of our mental life in the gaining of knowledge. The following principles are worthy of mention.

1st. There must be a vivid and clear perception of the objects of knowledge whatever sense is employed. Dim perceptions fade away.

2d. The attention should be sharp, comprehensive, and uninterrupted.

3d. The knowledge gained should be, not, as is too often the case in reading, a mere apprehension of the words but all that which the words hold.

4th. A frequent mental repetition of that which was in the field of thought, that the impression may be deepened. Learning to think is learning to remember. The thorough and rational student, he who goes down into the heart of the things to which he turns his attention, will not fail to have a good memory.

CHAPTER XVI

SECOND FORMS OF KNOWLEDGE — (*Continued*)

(ASSOCIATION IN THE ACTION OF MEMORY)

It is a universal experience that one thought suggests another, that one object calls another object to mind. Under some principle all our knowledge is related, nothing stands forth alone. Meeting an individual you inquire about his parents, or the school which once you both attended together, or someone you had known to be his intimate friend, or some project which had been started in the community in which he lived—indeed scores of inquiries, perhaps, arise in your mind relating to things which would not have been thought of had not this person made his appearance. Objects which enter into experience are widely linked together. This is shown in all the movements of our lives. We enter into conversation and field after field is traversed which were not thought of when the interview began. A person is suddenly called out to address an assembly and commences his speech with no definite line of thought to present, but each sentence suggests something further to say, and he spends a half hour in giving utterance to thoughts which succes-

sively rise up within him. Some law producing these results is ever operating in the field of consciousness.

How is the specific flow of varying consciousness kept up? Why do not the mind's movements stop when the subject which has engaged the attention is dismissed? The principles of association, which are in continued operation, it is not difficult to discover.

When of two ideas which had existed in the mind—had been thought together, were objects of attention at the same time—one comes back into consciousness the other comes with it. This is commonly called association of ideas. The ideas were in company and they remained in company. The philosophy of this it is not very easy to state. Do the ideas attract each other like a magnet and the iron? It is not reasonable to suppose that this is the true explanation, or a sufficient explanation, as ideas have an existence only while the mind is in action upon the subject for which they stand. The ground of inseparableness is not in the ideas alone but in the mind in which the ideas are inhering. Together they were associated in a mental act at first, which put them both on the same plane for reproduction. But whatever theory we adopt, the fact is a key that unlocks the movements of life in the reproductive energies of the mind. Under this force the past rushes up before us, and memory is able to do her work.

But association has a wider range than is found in the above statement. Presentations or impressions that occur in immediate succession, tend to suggest one another. This is certainly true if in the succession one of these grew out of the other, having the same root. This widens the former principle to a considerable extent and helps to unite the most of our ideas or experiences more or less closely together. In this we have what is called the law of contiguity. It may be contiguity in place. In this, objects seen together or nearly together tend to recall one another because, perhaps, they are associated with the same place, or because attention was given to them at the same time. Contiguity in time—leaving place out of the account—operates under the same law. Meeting two persons while on a journey subsequently the remembrance of one tends to call up the other, because of the identity of time in which they were seen.

There is a principle of resemblance that sometimes comes into action. A very tall man reminds you of some other tall man whom you have known. A person with an extremely large nose suggests to you some individual who also possesses similar extraordinary features. Such as these are illustrations in the world of sense. You hear the name of Napoleon and you think of Cæsar, Hannibal and Alexander. They were alike in being great generals. Socrates is mentioned and immediately

Plato and Aristotle come into your mind. A great philosopher suggests another distinguished philosopher. Michael Angelo was a famous painter, and when he is spoken of, you cannot help thinking of Raphael, Rubens, and many others who have enriched the world with their genius in art. These are illustrations under the principle of similarity in the sphere of talents and achievements.

There is a law of contrast through which suggestions are awakened. The dwarf suggests the giant; one color the opposite; the rich the poor; the strong the feeble. Boys in college call a college mate of large proportions the "babe" or "infant."

Our sole purpose in this exposition of principles is to bring to attention the laws which operate in the growth of mind, in putting the knowledge we have gained at our disposal. Hence we wish to emphasize the fact that the law of association acts most fully when the original cognitions are most vivid. Dim perceptions supply but little for associations to work upon. For this reason much that has had some place in life has faded away. There can be no effective association without clear and well-defined knowledge lying back of it. Association is the link, but there must be material to be joined by these links. This requires interested attention in the gaining of knowledge.

In association we have the track along which memory—both voluntary and involuntary—moves.

A thousand things belonging to the past come up before us because memory has struck the trail along which they exist. When the will is employed in our search for the past it is to find the track that leads to it. We do not accidentally and outside of the operation of law gather up the treasures of the mind which were wrought out in retreating time. Not more strictly is it true that all the stars in the heavens are held together by the force of gravitation, making nature one, than that the elements of our knowledge are in association which experience has supplied, but unfortunately it is also true that many of our mental acquisitions are too indistinct to be of much service. Intense mental action at every step in life would supply a world of stars of the first magnitude lying in the background of each moment as we move on into the future.

CHAPTER XVII

SECOND FORMS OF KNOWLEDGE—*Continued*

(THE LIFE AS PERPETUATED BY MEMORY)

THE value of knowledge as knowledge is twofold. 1. It is information, it is light. It is material on which the mind acts. It does not have an independent existence. The mind does not act

on that which is outside of itself, but on that which is within, for the outer world is beyond apprehension till sensations stir the brain and awaken the mind. 2. It is an energy of the mind. It is difficult to see how there can be talent or power in the absence of knowledge. Conscious knowledge is a stimulation of intellect, it is intellect at work upon and according to some specific object. As without intellect there can be no knowledge, so without knowledge there can be no productive energy of mind. Education is the mind's intelligence. There is no education held by the mind as a separable reality. Truth lives forever; ideas have no existence outside of mind, and only in the action of mind. They are mind at work, and cease to be when the mind is unemployed. Make a library of all the thoughts of the race, and then should the race perish, the library being still in existence, the ideas would have perished. Learning, knowledge, ideas, are mind movements, out of existence when out of consciousness, brought into existence again when through reproductive power they once more take shape in the mind.

In saying these things we do not mean that past intellectual work has become valueless when we cease to be conscious of it. It has produced an energy in our being that can never perish. There is accumulated power which can make the past live again; that which has gone can be revived by the touch of mind as though by a magician's wand.

Under laws of association we hold on to the past. Memory makes known to us our identity from the beginning of conscious life up to the present, and to this it probably will certify during our entire immortality. Though sleep breaks in upon the flow of consciousness, and at times there may be prolonged illness in which we lose sight of all realities, yet memory reaches back over these dark periods and gazes on the experiences of the years long since gone by. These experiences have not only historic certitude but an abiding existence in the life of the present hour. They were ours once, they are ours still. The present minute means more than the sixty seconds of time it covers; in it is a life wrought, it may be, into sublime realizations of good or degraded conditions of evil. We could not well dispense with the ability to recall the past, for this life would be disintegrated or perish moment by moment and it is of the highest importance that the treasures of the past shall enrich our lives, making us in the present wiser and nobler than we otherwise would be. Could the young be led to realize that every deed is imperishable; that every thought will cling to the soul; that every word spoken has an echo that will never die; that every impulse works its way into the fibres of being and will not let go its hold, all of these exalting or debasing character, so that the future is a living out the forces implanted in the days of the past, the controlling energy of the years

through which they have come would be appreciated. Memory in the exercise of its specific office summons as witnesses that which was good and that which was evil. It goes back to childhood and brings before us the scenes of our early years. We hear a mother's voice and the commands of a father. We gaze upon the circle at the fireside and live over again the scenes through which we passed in our home life. Our school-days appear in view, and the tasks we successfully performed and the failures we made come back to us again. Memory tells us of duties discharged and responsibilities shirked; of that which was noble or ignoble in our deeds. The ambitions we cherished, with the methods to which we resorted to realize those ambitions, stare us in the face. We have in our possession the evidence of that which was worthy or unworthy as food for reflection, giving us pleasure or pain. That which was upright continually bestows blessings upon us, while the evil we have done is a perpetual wound—a running sore—in our moral nature, and an instigation to conscience to apply her stripes. Memory is truthful, a witness that cannot be impeached. John B. Gough was accustomed to say: "I would give my right hand to banish from memory the scenes of my earlier years."

The indestructibility of memory should make parents careful as to the influence of the home, and watchful as to the associations into which their

children are thrown during the tender years of their life. The principle applies to the unnumbered things which make up the experiences of youth, of manhood, and womanhood—the books that are read; the songs that are sung; the associations of the schoolroom; the attendance upon church or absence from the house of God; the social circles in which the young move; all that for good or evil enters into the education of the young, shaping character and supplying scenes on which we gaze for the ennobling or the degradation of our being. Thus we are to-day what we were yesterday; the yesterday, though gone, still works in our life. The sports of youth, the studies of youth, the association of youth, the purposes formed and ambitions cherished, whatever had made up the years of the past linger both in character and in their imagery to give reality to the present. What we work out to-day bears but a small proportion to the content of our being, which memory may at any time bring back into consciousness. With what care should each day be lived that the to-morrow be richer in knowledge, wiser in purpose, nobler in thought, purer in imagination, more perfect in character, and happier in the consciousness of an upright past.

CHAPTER XVIII

SECOND FORMS OF KNOWLEDGE—(*Continued*)

(REPRODUCTION AS IMAGINATION)

IMAGINATION, in general terms, is the power of imaging. In the act of memory there is reproduction of some particular perceptions recognized as such; in an act of imagination there is the reproduced image without necessary recognition. The past cannot be literally brought forward to the present to become an object of perception, but it can be reproduced in the mind as it had appeared when perceived. Through the senses we, day by day, are observers of material things. We perceive them through sight and hearing, through touch and taste and smell. They make on the mind impressions of objects as to size, form, color, sound, roughness, smoothness, taste, fragrance—properties almost innumerable. By means of these experiences, there is developed in the mind distinct apprehension of the different properties possessed by material objects. The words square, triangular, round, red, yellow, green, rough, sweet, bitter, loud, shrill, etc., have a meaning to us in the absence of material manifestations for which they stand. We have gained specific notions relat-

ing to a variety of properties or phenomena, and can image them after the objects in which the properties appeared are beyond the reach of our senses.

It is necessary to bear in mind that imagination is supplied with its material—that from which its images are formed—by the knowledge and experiences of the past in the natural world. The innumerable objects, varied scenes, and changing phenomena of the months and years gone by, which have made their impressions on the mind, furnish the content of all the reproductions or images which imagination holds up before us. We repicture them, in wholes or in parts, singly or in groups, unchanged or in combination, by an involuntary inflow of the past, or through a purposeful selection from the vast field of experience.

Anything in the past may be more or less clearly imaged. It is the scenery which has been woven and hung up before us, and upon which we can gaze. We are, in the action of imagination, what we have made ourselves to be by the life we have lived. It is this which largely gives a meaning to the language we use, makes communication one with another intelligible, and supplies a groundwork for all progress and improvement.

But it must not be supposed that all the past comes back to us with equal vividness. The imagination is controlled by its dominant perceptions. The picture gallery of the soul is hung with views

drawn by the brush that painted the deepest colors in the panorama of previous experience. He who has dwelt amid, and been stirred by, the crags and bold mountain scenery naturally traverses in imagination those regions which have been seen to be so bold and rugged. There may pass from your vision the events of the placid days while out upon the ocean, but the shipwreck you witnessed abides with you in fadeless colors. He paints war scenes most vividly who has gazed most intently upon its horrors. To appreciate maternal tenderness we must feel the touch of a mother's hand. The beauty of a lovely landscape which had charmed your vision comes into view many, many times, while all about it has perished from your imagination. The stores which the imagination holds have been gathered from that which has made the deepest impression, which has interested you the most.

The imagination is active in every rational movement. The architect in planning a building sees it all before a brick is laid or a nail driven. The inventor conceives an end to be reached, and then constructs a device to achieve the desired result. The general makes his plan of campaign before giving a single order to his troops. The farmer sows his seed in the autumn for the harvest to be reaped the coming summer. The young man chooses his vocation in view of anticipated results to be attained fifty years hence.

We are all the time reaching out beyond the

present. This is involved in a life governed by motives. We picture the future and prepare for it. The years to come rise up before us and we make our plans to fill this picture with concrete experiences. In the very simplest things imagination is employed—in the order the housewife makes for the dinner; in calling on the grocer for a pound of tea; in constructing steps for entrance at the door of our dwelling. Something comes up before the mind, is there imaged, before acts are performed.

Were it not for the imagination classified knowledge would be impossible. Language is made of general or class terms. Objects which resemble each other are put into a class by themselves because of such resemblance. In this way our knowledge is organized. The multeity is reduced to a unity. The almost countless objects are arranged in a limited number of classes, and we have terms standing for these several classes. All common names are class-terms. Thus the words mountain, valley, lake, tree, house, man, animal, biped, quadruped, etc., stand for classes which possess certain characteristics common to all the objects in the same class. Hence the word mountain, to the reader, has a specific meaning, and when a certain elevation of land is seen or spoken of it is called a mountain if it contains the characteristics common to that class. You have in your mind—in your imagination—the characteristics of the class as to elevation, etc., or you could not put

this particular elevation into the class; you would not even know what the word meant. He who reads intelligently any page, or listens to any speaker employs his imagination in connection with every common noun—class term—used; and it must be continually at work if the printed page or spoken address conveys to him any intelligent meaning.

It is impossible to conceive of any mental power of more value than this. It comes into use at the very beginning of our intelligence. It has a place in all knowledge. Even in perception, the first complete form of knowledge, imagination is employed if the object discerned by the senses has any significance. To perceive trees along the wayside, cattle in the field, horses harnessed to a carriage, so that to yourself or to another you can assert that these definite objects have been perceived, you must in your perceptions put each into the class where it belongs. To call one set of objects trees, another cattle, and another horses is to make class distinctions; and when you see a portion of the vegetable world as trees, or of the animal world as cattle or horses, you discern them as conforming to certain great class realities which class realities are purely creations of your imagination. All class-notions are formed and held in the mind by the imagination, though constructed according to principles of classification and reasoning.

This leads us to say that science in its unfold-

ings is largely indebted to the imagination. The progressive scientist does not rest on what is already determined, as a finality, but finds in it a prophecy of something more, as yet in the region of the unknown. There are problems still to be solved. But how is the solution to be reached? The unknown should correspond, in vital particulars, with the known, but cannot be wholly like it; there must be something in addition to the known. The search for the new or unlike, on the basis of the like, calls for sharp discrimination in the field of the probable. To discover is to widen the known out into new fields into which imagination has penetrated, and must penetrate before science determines what is real. Imagination projects an ideal, and science verifies or disproves the ideal. The hypothesis precedes the verification.

Scientists construct theories before they make positive determinations. Newton conceived of universal gravitation some time before he was able by mathematical calculation to prove its existence. In all scientific advancement the theoretical precedes the positive. Evolution, in a radical or modified form, is accepted by all students of science; but as yet it is only a probability as a solution of the problems of nature.

CHAPTER XIX

SECOND FORMS OF KNOWLEDGE—*Continued*

(USE AND ABUSE OF IMAGINATION)

Persons, though having the same employment and actuated by the same motives, do not live precisely the same life. The forces within the soul react unequally on that which comes from without. No two individuals will give identically the same report of an address to which they had listened. The reports may not contradict each other, but will be diverse, because, and to the extent, of differences in the mental furnishings of the listeners. These differences are found principally in the domain of the imagination, that which the mind of the listener supplies as the words fall on the ear. We clothe from our own personality that which is imparted to us. Witnesses in court, though strictly honest, are sure to give testimony in which there are varying elements depending on the varying impressions received from the scene on which they have gazed.

No other faculty of the mind is so liable to disorder as the imagination. Insanity is not an aberration of judgment, it is not moral obliquity in which there is false reasoning, but it is the sub-

jective mistaken for the objective; it is the imagination running wild, obscuring the real. Mental images take the place of outward objects. In hallucinations the imaging faculty is abnormally active, the unreal appears as the real, but the judgment is not deceived. The images "will not down" but they are known to be only images.

There is what is called day-dreaming, in which there is no mental disease, but an excessive and exclusive action of the imagination. It is harmful in that it fosters the divorcing of energies which should act jointly; it is an unbalanced state of mind. Imagination is valuable in mental copartnership, but should not be allowed to occupy the whole field by itself. That is the best condition of mind in which there is purposeful thinking toward some definite end, all under control of the will. To plan is very different from castle-building; to move consistently through the great world of thought is wholly unlike the floating of the imagination through unreal fields whose possessions are wholly unattainable. One is earnest, serious, and disciplinary; the other unnerves the mind and squanders our energies.

The imagination grows from that upon which it feeds. The child that is born into a vicious home takes into its life poison which will never be wholly eradicated. Vicious surroundings in a community create peril for the moral life long after the youth ceases to gaze upon them. Vile reading

contaminates the fountains of the soul, though the polluting publications be immediately cast into the flames. He who spends his youth in the midst of virtuous associations will find coming back to him in after years visions which will charm the life and strengthen his purposes for the right. The life of to-day is what we have made it to be. The boy pictures Indian battle-scenes because he has read of bloody carnage among the wild men of the forest. Many a lad has had glowing visions of pillage because his soul had been filled with images of successful robbery. It is because of this law of reproduction—creating an atmosphere pure or impure, wholesome or poisonous—that it may truthfully be said that "The child is the father of the man." The imagination pays interest on our investments—for good or evil—a thousand fold.

Imagination is capable of exercising almost unlimited control over the body. Young men without number have plunged into every form of vice through the passions which this faculty has stimulated. To keep the body under, the imagination must be restrained from the dark paths of evil and directed to fields that are pure. Much of that which is called realistic in literature is terribly harmful, from the painting of vile scenes, though they be condemned in words. To picture vice in order to make it loathsome is worse than folly: its tendency is to corrupt the imag-

ination and prepare for the surrender of the moral life.

The normal activities of the body are to a great extent under the control of the imagination. Many astonishing results have followed its stimulation. The senses of taste and smell are often at its mercy. Tell a child, and many a grown person too, that the cream is sour and it will taste sour, though perfectly sweet. Halleck speaks of a member of a family purchasing some perfectly fresh meat who remarked at the table that he was sorry he did not have some Frenchmen as guests at dinner, since the meat would exactly suit them, as it was so gamy and tender that it would not hang on the butcher's hook. Some at once perceived an unmistakably putrid taste; and one member of the family, unable to endure the odor, left the table. Many instances of death, from action of the imagination, have been recorded, such as the following: A man was sentenced to die by the court. He was blindfolded, a harmless incision was made in the arm and tepid water allowed to trickle down it, the attendants commenting on the progress of the case—the flow of blood, the weakening of the pulse, etc.—the criminal, supposing it all to be genuine, soon died. Illustrations of the power of the imagination over the body could be given almost without number. Indeed everyone has felt this influence to a greater or less extent.

While the imagination is called into action in all

our knowledge, for we cannot have every object to which knowledge relates present at every moment, there are some domains of mental activity in which it is specially active. This is true in the fine arts generally. The painter conceives and then works out an ideal scene. The sculptor employs his chisel to find in the marble the conceptions he has formed. The musician mentally hears the strain before he produces its concrete expression. As an artist he goes far beyond the mechanism of the composition and charms you with music which cannot be printed on the page. That which is most exquisite is not embedded in the muscles of the fingers, but breathes out from the soul. Poetry is not rhyme or inverted phrases, but imagery wrought out by the imagination, whether expressed in metre or in prose form. Rigid didactic utterances never reach the inspiration of eloquence; it is only as imagination clothes the theme in the forms and colorings of beauty that the audience is taken captive by the speaker.

To guide the imagination, make a proper choice of the objects of perception and attention. To quicken and strengthen the imagination, (1) Cause your perceptions to be vivid and intense. (This is under the same law that operates in memory.) (2) Give special prominence to the reading, studies, and conversation which call into exercise the image-making faculty. In doing this, accustom yourself to make the imagery of thought

clear and vivid. Do not allow yourself to stop with the words, but reach out for their content. That which is vividly produced will be vividly reproduced.

CHAPTER XX

THIRD FORMS OF KNOWLEDGE

(FIRST STEP—CONCEPTS)

We have considered two forms of knowledge the human being gains—the presentative and representative. We do not see how the intellect could be developed without perception, imagination, and memory. But with these alone the scope of intellectual activity would be much less than our daily needs.

In defining man he is called "a rational animal." He is an animal in common with all the brute world, but to distinguish him from the rest of the animal kingdom, he is said to possess a rational nature, that is, reasoning powers. If this is his special differentiating faculty we need, in this discussion, to give to it careful scrutiny, and trace its development. To perceive, to image our perceptions, and to recognize them in their time and space relations, supply a necessary foundation of intelligence. But there are other forms of knowl-

edge which become constituents of our life. Our senses, in perception, make known to us individual things; imagination images individual things; memory recognizes individual things as imaged by the imagination. But mental life would be restricted to very narrow limits, if knowledge did not go beyond these two fundamental forms.

The mind possesses the power not only to perceive objects by means of the senses, but to perceive relations which such objects sustain to each other. Now, relations are as much a reality as things, and the mind is as capable of perceiving the reality—or actuality—of relations as the reality of things. It is evident that objects must first be known, in order that relations may be observed; but being known they are seen to be more or less like each other. At an early age the child notices resemblances, and is disposed to call such objects as quite closely agree, by the same name. He is told, for instance, that a certain animal is a horse. He sees other animals which bear a general likeness to his father's horse—in shape, in movement, in the use to which it is put, and he calls them all horses. He has gained the conception of class. This process of associating objects together to form classes goes on indefinitely, so that in time he gives a class name to everything he perceives. The mental process is comparison. In comparing he notices agreements and differences; he joins objects together in the same class because of

agreements, he separates into different classes those things which are unlike. He learns to distinguish, so as to call one animal a horse, another a cow, another a dog, etc., because of marked differences seen to exist. In this way he builds up as many classes as the radical differences observed. This is the first step in thinking. We call it conception. In perceiving a single object, simply as an object, without relation to a class, we have what may be called a primary or first notion; but perceived as a constituent of a class, we have a class or general notion. An object appearing to the sense of sight, simply as having a certain shape, color, movement, etc., unrelated to anything else, is merely an object, one of millions of objects, it may be; when it is perceived as a horse it stands for a class, and it means much more to us than simply a thing. In this way nature and all realities become organized into class wholes as a process of thought. This is the first step which the mind takes in acquiring the third form of knowledge. It gains class-notions. The mental operation is spoken of as conception—the product as a concept, a general or class-notion.

Along with this work of gaining general notions there has been a development of language. We have before called attention to the fact that every name, or common noun, expresses a class-notion. It has also been said in a previous chapter that our language is full of class-terms. We use them

in expressing our thoughts, in all verbal intercourse, in all written communications, even in thinking itself. Hence, as we have said, language and concept—making progress side by side, they develop together and they cannot be separated. Into the terms the notions are crystallized. The class-word stands for the class-notion. The notion nestles in the word, it gives meaning to the word, and the word is the vehicle of the notion.

By this form of knowledge we do not enlarge the field of the senses, but scrutinize, organize, and give meaning to that which the senses make known to us. We extend our knowledge though we do not increase the number of objects in the world of sense. Yet we come to know much more about objects of sense. The statement frequently made, that we do not thus add to our knowledge, shows great lack in the understanding of the subject. It is true we unfold what was before enfolded, we make explicit only what was implicit; but it was enfolded in the thing, implicit in the thing, not enfolded and implicit in the mind.

Nothing enlarges our field of view more than the employment of this elaborative faculty. Much of advanced thinking consists in enlarging, correcting, deepening, and making more definite the class-notions formed. This is true in every field of science, in every domain of study and the arts, in every sphere of human activity. Indeed, civilization means so much more to-day than in the past,

not in that new worlds have been discovered, but because of what has been wrought out in the world already within reach of our senses. The future will surpass the present because of the deeper penetration into the nature and relations of things.

In defining man "a rational animal," we first discover his superiority in the capability of forming concepts or class-notions. Nature is not to him objects only, but classes of objects. All parts are interdependent, nothing is in isolation. We have reached the highest generalization of these vast creations, in that sublime unity of all their parts to which we apply the designation, "Universe." It turns, moves, and proceeds as a whole. From this we progress by a series of subordinate gradations, from larger to smaller concepts, until we finally reach the individual. Or tracing in the opposite direction, which is the psychological, we ascend in our notions from the individual up to the class, consisting of several individuals put together because of their resemblance; thence up to higher class-notions from the union of lower concepts, till at last we grasp the all, as the highest concept possible to secure in the unity of the whole. This grasping of the all, no portion of the animal kingdom below man can do. Its powers are defective in the very first step essential to thinking. It is guided by sense, but it is not reasonable to suppose that definite abstract conceptions are formed.

CHAPTER XXI

THIRD FORMS OF KNOWLEDGE—(*Continued*)

(SECOND STEP—JUDGMENTS)

The mind in its work of elaboration does not stop with the classification of objects—the production of class-notions—but discovers that the classes of which notions are formed sustain relations to each other. These notions possess agreement or disagreement—that is something may be said affirmatively or negatively of them as well as of the individuals which compose them. Every proposition or simple sentence is an illustration of this fact, as for instance, "Man is mortal," "the weather is cold," "Man is a biped," "horses are quadrupeds," "birds possess wings," "some men are learned." Or negatively, "some men are not learned," "horses are not bipeds," "air is not a solid," "water will not intoxicate," "no human being is omniscient."

Language is almost wholly made up of propositions, either affirmative or negative, because our knowledge or thinking consists of the perception of agreement or disagreement in the relation things and classes of things bear to each other. This shows a distinct advance on the plane of thinking

over the formation of class-notions. Something is affirmed or denied—in whole or in part—of all class objects. The affirmation or denial is a judgment. Did the mind stop with the formation of concepts, the work done would be comparatively useless. We need to understand the character of these general notions, their place in the great world of being or action, the use to which they can be put, the lessons they teach, etc. Every page of any book contains scores of declarations — expressed judgments — of an affirmative or negative character.

All communications, whether vocal, written, or printed, are made up of propositions in which something is said about the objects for which general notions stand, or in which class realities are put into relations with individuals.

Largely judgments grow out of observation and experience. They are gradually acquired as the days and years go by; as new fields of activity and study are traversed; as the attention is turned successively toward the realities by which we are surrounded. The farmer draws out from his occupation one set of judgments, the merchant another, the mechanic another, the lawyer another, the physician another, the minister still another. We are constantly accumulating judgments which, if accurate, represent knowledge. The acquisitions of scholarship are an enlargement of the field of accurate judgments, the extension of the field of

thought in the direction in which scholarship is prosecuted.

We should not make the mistake of supposing that judgments are always reliable ; any mental affirmation is a judgment, whether true or false. The child's view of everything of which he gains some knowledge is sure to change as he gets a better and fuller understanding of the world in which he lives. Persons of mature years are constantly correcting the opinions they had formed. Further light dispels delusions which had lurked in the darkness. But true or false, accurate or inaccurate, judgments are the mode of the mind's action in passing on beyond the mere classification of objects of sense, or class-notions in any department of being or reality.

All thinking must be carried forward under law. There are fixed conditions for the formation and development of judgments. All logicians agree that there are three primary laws of thought. They are a necessity, we cannot do otherwise than to observe them if legitimate conclusions are reached.

1. *Law of Identity.*—Whatever is is. A thing must be identical with itself. To the same words unlike meanings are sometimes given, but then they are not the same things, and when employed in different parts of an argument they must be used in the same sense or no conclusion can be reached. We do not bring forward any proof of

the law of identity, it is not susceptible of proof because it is fundamental, and is seen with the force of absolute certainty. If a judgment is true to-day it will be true to-morrow, it always has been true and it always will be. Thus man is man, animals are animals.

We do not mean by this that nature stands still, that theories remain unchanged, that civilization has always the same content. We know it to be true that the present condition of the material universe is the product of the action of innumerable forces through an indefinitely long period of time; that on the earth changes are constantly taking place; that nothing is stable, and that man himself is never twice alike in his powers, his character, and his life. We know that change is the law of being. But when we speak of the law of identity, when we say that whatever is is, that a thing is identical with itself, we are affirming that terms must be used in the same sense in all parts of the same argument, otherwise endless confusion must result. Without this there can be no argument. We may speak of man as mortal or as immortal, but in the same connection we must confine our judgment to one of the two meanings. We may not use the two interchangeably. Man the mortal is mortal; man the immortal is immortal. The law of identity is introduced into logic, in all valid thinking, to make judgments precise.

2. *Law of Contradiction* (perhaps better called

Law of Non-contradiction).—A thing cannot at the same time and place both be and not be. A man cannot be both honest and dishonest at the same time. Of two different transactions one may be honest and the other dishonest, but the same transaction cannot be both honest and dishonest. When two propositions are contradictory, they cannot both be true. This second law follows from the first as a necessity. It is only another form of statement of the same thing. An object cannot be red and not red.

3. *Law of Excluded Middle.*—Everything must either be or not be, there is no alternative, no middle course. An apple is either sour or not sour, an orange is either round or not round. In everything there is some particular quality or the absence of such quality, one or the other. It must be borne in mind that the only opposite to a quality or statement is the negative of such quality or statement. We say that a man is either tall or not tall, we may not say that he is tall or short, for he might be of medium height.

Another law is given by some writers called *The Law of Sufficient Reason.* Everything—event, phenomenon, or relation—must have a reason for its being, and being what it is. We cannot conceive of anything coming into existence, anything transpiring, without a cause—an adequate or sufficient cause. A man is found dead on the street, there must have been a cause of death.

The above are laws conditioning and regulating thought. They are self-evident, they do and must operate in all our judgments.

CHAPTER XXII

THIRD FORMS OF KNOWLEDGE—(*Continued*)

(THIRD STEP—REASONING)

"As in the judgment," says Halleck, "we compare two concepts and decide that they agree or differ, so in reasoning we compare two judgments. From this comparison we draw a third judgment, thus completing a process of reasoning." It is hence seen that there are three, and only three stages in thought: 1. Conception. 2. Judgment. 3. Reasoning. The product of these are: 1. Concepts. 2. Judgments. 3. Argument. Concepts and judgments we have briefly discussed; reasoning or argument we must now consider.

As in conception we construct classes out of individual objects, and in judgment we state the relation of classes—comparing one with another—so in reasoning we compare judgments. An argument is a process of thought in which by comparing judgments an inference or conclusion is drawn. Elaboration or thought goes no farther than this.

There are two distinct forms of reasoning, called

in logic, the deductive and the inductive. In the deductive we reason from the general to the particular. That which can be affirmed of a class can be affirmed of all the particulars which make up the class. It is an axiom, as will appear when stated as follows. That which can be affirmed of all—not collectively but distributively—can be affirmed of each. For instance:

All men are mortal.
John is a man—therefore
John is mortal.

If true of all men, it must be true of John who is a man.

In the negative form, that which can be denied of all can be denied of each.

No man is perfect.
John is a man—therefore
John is not perfect.

Find what is true of a class, either positively or negatively, and it must be true of each of the parts which make up the class.

We call the argument thus formally stated a syllogism. "The name syllogism means the joining together in thought of two propositions" from which a third is drawn. We have thus in a syllogism three propositions or judgments, the first two are called premises, as they are the ground-work of the conclusion; they contain within themselves

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the reason for the conclusion. The third judgment is called the conclusion or inference, because it is drawn from the foregoing.

It is important to bear in mind also that every syllogism has three and only three terms, and hence that each term appears twice. The terms are named respectively major term, minor term, and middle term. The premise usually stated first, is called the major premise, and contains the major and middle terms. The premise that follows—the minor premise—contains the minor and middle terms. The conclusion found by comparing the major and minor premises by means of a common term—called middle term—contains the major and minor terms. The reason for comparing the major and minor premises is to find the relation between the major and minor terms. The only purpose of introducing the middle term is that we may have a common means or measure of comparison. In the major premise we compare the major term with the middle term as just stated; in the minor premise we compare the minor term with the middle term; and if the major and minor terms both agree with the middle term, they must agree with each other. The conclusion states the resulting agreement of the major and minor terms. The middle term is only a medium of comparison, as, in practical life, the surveyor's chain, the yard measure in the store, the pound weight on the scales in the grocery. We find agreement in length by using

the yard stick, in quantity by using the pound weight.

Can Henry graduate from College? Yes. How is that? Students who complete the prescribed course of study graduate.

Henry has completed the prescribed course.

Henry can graduate.

The question raised related to Henry's graduation. In the first premise the condition of graduation is stated.

In the second premise it is affirmed that Henry has met the conditions—the completion of the course of study, for all students, and for Henry consequently—therefore he can graduate. If Henry had not completed the prescribed course there would be a disagreement with the middle term, and therefore the conclusion would be negative—he could not graduate.

The foregoing illustrations are sufficient to enable the reader to understand what is meant by deductive reasoning. The conclusion is an explicit statement of what was implicit in the premises. In the conclusion nothing is supplied that was not in the premises—the preceding judgments—but it is unfolded so as to stand out by itself.

Deduction may be said to be of but little service beyond showing the process of mental action.

In inductive logic the reasoning is from particulars to the general. It is the process employed in detecting the general laws or uniformities, the re-

lations of cause and effect, or, in short, all the general truths that may be asserted concerning the numberless and diverse events that take place in nature and our experience. The greater part, and, some philosophers think, the whole of our knowledge, is ultimately due to inductive reasoning. (We cannot admit that it is all due to induction.)

It has been stated that knowledge begins with particular objects. In time it is noticed that many of these objects resemble each other, and we associate them together and give them a name in common; and thus, as has been said, we have concepts. But experience is limited, and we have not time or ability to make an exhaustive enumeration of objects belonging to any class. Finding certain traits or qualities in all the individuals of a class so far as observation goes, we conclude these traits or qualities will be found in the entire class. This is induction. Having found it to be true that all men in previous ages of the world have died, we infer that all men are mortal. Discovering that no man has ever been perfect in knowledge, we come to the conclusion that limitation of knowledge is inherent in man's nature. Newton discovered that gravitation extended to all objects on the earth, and he inferred that it prevailed everywhere throughout the material universe. Man's inability to annihilate matter, whatever physical or chemical changes are wrought, has led scientists to hold that matter is indestructible.

By this method, and under a mental tendency to universalize our experiences, we construct the general from particulars ; we reach propositions broader than the actual data gathered; we even go so far as to believe in and teach a positive uniformity of nature. Every universal principle, except first principles, is based on the knowledge and light of experience. It is by induction that all science has been built up—in the wide fields of chemistry, geology, biology, botany, astronomy, and even in psychology. Uniformities proclaim law. All advancement is step by step along the pathway of experience and discovery, eventuating in the generalization of particulars. No general judgment has ever been formed but that extended beyond the limit of direct observation. We proceed from the known to the unknown by virtue of certain discovered agreements which, we hold, authorize the extension of our theories beyond the range of actual investigation.

It is evident there is much liability to error in the inductions we make. This grows out of the finiteness of our powers and the limitation of our opportunities. But if in our investigations we can go down so deeply as to find the fundamental lines of unity and diversity, agreements and differences which are radical, not accidental, we come much nearer to absolute certainty. Many a coincidence is not based on a principle, there is no law back of it. But if there is mathematical proportion, or

structural correspondence, or functional similarity there is a basis in our inductions for a conclusion almost absolutely certain.

Such is the life which we as thinkers lead. We progress step by step. We form judgments, compare and combine them, we move on from one logical determination to another. Concepts are wrought out and combined to form judgments; judgments are united in reasoning; one conclusion becomes the premise in further argument, thus every part of the universe of thought and being is traversed with more or less skill, and successful achievement in unfolding truth.

CHAPTER XXIII

THE LOGIC OF DEEDS

In defining man as a rational animal we designated the sphere he is made to fill. The life of a human being is distinctively and characteristically a life of thought. He is capable of making a choice, acting under a purpose, looking definitely toward some end. He forms plans and employs means to execute the same. He is not like the lower animal world, swayed by instinct, but has a reason for what he does. In the gaining of a livelihood, in the pursuit of fame, in his efforts to

acquire scholarship, in practical politics, in the study of statesmanship, in the mastering of a profession everything is done for a purpose. Some desirable end is perceived; the judgment is exercised; conclusions are reached and acts follow.

Agriculture, for instance, is a great problem into which innumerable elements enter. These are questions of soil, of climate, of the seasons, of the chemical constitution of the various crops, of soil exhaustion and soil fertilization, of drainage, of rotation of crops, of the time for seeding, of the time and mode of harvesting, of the markets, of grazing, of preparation of food for stock, of the housing of stock—questions chemical, mechanical, commercial, and sanitary, which must all be considered to secure successful results. Premises are laid down and conclusions drawn. From the variableness of conditions the premises are constantly changing, requiring new conclusions. The farmer will prosper only as he handles with skill these complex questions, as he sees sharply and reasons wisely.

When the merchant fails it is usually because he has made a mistake in his logic. He occupies a place between the producer and the consumer. He must buy and sell. What shall he buy? That which he can sell. Shall he invest in certain new productions, productions which have never been on the market before? Can he find sale for such goods? The answer, yes or no, must be an infer-

ence resting back on many conditions that are favorable or unfavorable. In order to do a successful business, he must provide for the public what it wants; he must have his goods on hand at a proper season of the year; he must please the people as to price and still make a living profit; he must conduct his business so as to attract customers; he must buy, but must not over-buy. How to turn over his capital to avoid losses on the one hand and make adequate profits on the other, requires not only care but wisdom in which a multitude of facts must co-operate to bring about a definite result. It is all a problem of practical logic in which accurate and comprehensive reasoning must be employed. He is the best merchant, who, in addition to a genuine commercial spirit, reasons carefully, broadly, and safely.

The physician is employed in a sphere in which many difficulties must be overcome if any service be rendered. Nearly every disease is internal—of the lungs, heart, stomach, intestines, the circulatory system, the brain, the spinal cord, different membranes, etc. His first work must be that of diagnosis. He must determine and locate disease while the diseased parts are out of sight—beyond the reach of the senses. His only possible method is to reason from symptoms. He must employ logic. His knowledge is purely inferential. A failure in this may be fatal. But the disease once determined, how shall the patient be

treated? Are there specifics? He who trusts to so-called specifics is liable to make mistakes without number. There may be complications of diseases, so that while one person would be benefited by a certain medicine, another would be greatly harmed. Then the constitution must be considered, for there may be special tendencies growing out of hereditary or local weaknesses. The strength of vitality must be taken into the account, the condition of the heart, the stage of the disease, many things which should modify the treatment if health is to be restored. So complex are many of the cases which come into the hands of the physician, that the utmost care in reading the disease and in treating the same is required, and it is not strange that mistakes are sometimes made.

In the application of law to human conduct as administered by the courts, it is not easy to secure absolute justice. Statutes are not always clear; testimony is not infrequently uncertain; circumstances may enter into the case which were unlooked for, and motives are not readily determined. Often everything depends on circumstantial evidence, which needs the most careful sifting. Was the alleged offence premeditated, or committed on the spur of the moment under special excitement? Was the act aggressive or in self-defence? Was the party of sound mind, or insane, or laboring under a delusion? The attorney argues the case—on the law to the judge, and on the testi-

mony to the jury. He gives his reasons for the position he assumes, of guilt or innocence of the persons arraigned. It is a battle of logic. The court seeks to find the truth, as an inference from the law quoted, the testimony given, and the arguments presented.

The minister, to effect any permanent good, must support his appeals with reasons which convince the judgment. The statesman aiming to make the country prosperous must be able to understand the complex forces in operation, to see in advance the outcome of proposed legislation; he must possess a prophetic gaze, which is not a guess, but a logical reading of the movements of statehood. In all industries, in all agencies of progress, in all reformatory operations everything is done for a purpose, and the means employed have some specific end in view. Civilization when regarded from the stand-point of the arts, or educational appliances and work, or the literature of a people, or the governments and polity of nations has been developed by man as a thinking being. All of this is the outcome of thought, the product of man's rational powers. History is an argument for good or evil. The world is to-day what valid or perverted reason has made it to be.

CHAPTER XXIV

TRAINING OF THE POWERS OF THOUGHT

The culture of every mental faculty is secured by regular, consistent, and vigorous action. Non-use results in feebleness. The form of use determines the form and direction of development. The powers of perception are stimulated and made more acute by employing them in discriminating attention upon objects of sense. The exercise of the imagination gives to this faculty alertness, clearness, and scope. And we learn to think by thinking—we become logicians by the exercise of our logical powers.

While it is true that in the earliest years of our life sense-knowledge predominates—and that it was intended that sense-knowledge should at that age predominate — yet incipient thinking soon makes its appearance. The first step the child takes in the world of thought is in the discovery of relations existing among the material objects by which he is surrounded. He notices resemblances and differences, as we have before learned. Objects that closely resemble each other he associates together, calling them by the same name. Objects which do not resemble, that differ from each other, he separates, and thus several classes are formed.

This process goes on continually, and in this manner the external world is organized under class-notions.

The child that gives attention most fully and carefully to these relations, lays the best and largest foundation for reasoning. To cultivate the powers of thought the first principle to be enunciated is this, "Be ever on the hunt for relations." Be not content to apprehend individual objects only, but gain the habit of tracing their relations. Create the tendency to go out beyond the manifestations of sense into the world of thought.

The operation of this principle is not confined to childhood but should extend through the entire life, in all fields of scholarship, in every profession, in every vocation, through all the domains of mental activity. It is fundamental in the arts, in politics, in statesmanship, in the proper reading of history, in the understanding of science, in the analysis of civilization. To stop with sight or hearing, or any other sense, is to have a confused jumble of objects. It is like gathering the brick, leaving them scattered promiscuously about you—not arranging them in the walls of a building. Everything is relational. The leaf is nothing only as it grows out of the twig; the twig has no significance unless attached to the branch; and the branch has no purpose only as seen in vital connection with the tree. This great world in which we live consists of parts, not dissevered, but joined

in a unity of the whole, interdependent, so that no portion of it can be understood out of relation with the rest.

The first thing to be sought for in the domain of thought is accurate and full knowledge of relations, in nature, in mind, in the industries, in the professions, in the rights of persons and things. Thought is constructive and is developed by discriminating observation, by reflection, by every effort made to solve the problems which come to our attention.

The principle just enunciated applies to every stage of thinking, to the comparing of concepts in the formation of judgments, and the comparing of judgments in consecutive argument. The direction insisted upon, then, is this—give careful attention to the processes of reasoning; create the habit of logical consecutiveness and dependence in thought so that it will be natural to you; with accuracy seek to gain strong convictions of the reality and value of truth in the conclusions reached, and thinking will be a pleasure, and the powers of the mind will become more mighty.

The principles we have presented have a bearing on our intellectual life in whatever field they are considered—in business, in student life, etc. Reading or studying is often done in a very unprofitable way. The page is hurried over, the words are perceived, possibly committed to memory, with a very inadequate idea of their depth of meaning.

It is not enough to see and pronounce the words, the attention should be held to each sentence until it is fully comprehended. A lexicon should always be at hand to define words not fully understood, and every proposition stated should be dwelt upon till its meaning is taken up into the mind.

It is the vice of the age that too many books are read, that is, the reading is in a hurried, slipshod way. Not only is less knowledge gained, but a habit of being satisfied with a mere glance at the meaning which the page contains will induce superficiality in whatever is undertaken. Many persons read too fast. There should be close and exhaustive attention, and for this time is a necessary element. Students going through college lose half the benefit they should derive, because of the hurried manner in which the work is done. The benefit of exhaustive study is seen in cases like the following, which we quote from Mahan's "Psychology." After stating that "the judgment is developed and improved by means of a habit of careful discrimination in respect to objects of thought, noticing their points of resemblance and difference; by the habit of careful classification and generalization, and of the equally careful reference of facts to principles," he says: "One of the most eminent mathematicians this country ever produced, laid the foundation of his high attainments by careful study of a single work—the

common arithmetic. Finding himself on his entrance into college uniformly deficient and behind his class, especially in mathematics, he went back and took up the treatise referred to and studied it, until he had not only solved every problem presented, but fully comprehended every principle and rule in the science as there treated, and furthermore, the reasons and grounds of the validity of the rules and principles. The result was that from that time onward no member of his class, and no student in the institution could keep in sight of him in any department of mathematics. Such are the immutable conditions of attaining a strong and well-balanced judgment, and no individual who thus thinks and studies can fail to attain this high power. Not a few students become immutably disciplined in the science of non-thinking by the careless, indiscriminating, and incomprehensive study of many books."

There can be no objection on the moral side to the reading of romance simply because it is romance, and many books belonging to this class, may well be studied for the improvement of style of composition. But to read novels just for entertainment during the hour, and not for knowledge or personal improvement—doing no thinking—is mentally relaxing, and novels are usually read in this way.

To perform the work of classification, of comparing judgments—of reasoning—so as to make it

a habit, and as exhaustively as time and powers will permit, must certainly discipline the faculty of reasoning. The broader the scholarship the more material thought will have to work upon. Leading the life of a careful student contributes to the resources on which powers of thought may be employed, and if these powers are rightly employed, there is a constant drill of the understanding.

CHAPTER XXV

FOURTH FORMS OF KNOWLEDGE

(FIRST PRINCIPLES)

SOME writers maintain that the three forms presented in the foregoing pages comprise the entire field of knowledge. From this position, with much confidence, we dissent. Knowledge is the perception of truth based on grounds evident and certain. There may be truth without the knowledge of it—and beyond the possible knowledge of it because of our limited powers. Certainly truth of which man has been ignorant has existed through all time. The only question we raise is as to forms not embraced in presentation, representation, and thought. We have conceptions which are not the product of the mind's action in

either of these modes. Do these conceptions stand for reality? Are they the grasping by the mind of that which is actual and certain? That to which they relate is not perceived by the senses, and therefore it cannot be reproduced as having been made known by the senses. It is not a generalization of thought, it is not inference. If neither of these, what is it?

That which is known by sense is phenomenal, a manifestation through properties. Through imagination and memory we have found that that only can be reproduced which had previously been produced. Then reasoning takes the material these supplied and works it up into classes and systems through discovered relations, as we have had occasion to say. It is by reasoning we prove or demonstrate propositions laid down: It is sometimes said that only that is known which is demonstrated. Accepting this position nothing could be known. You cannot build an argument without something to build on. You cannot even start an argument without something known to start with. Proof is possible only when you have truth which does not need to be proven as the basis of reasoning. There must be something perceived and known or there is nothing to reason about. There must be premises accepted as true before reasoning becomes possible.

We have seen that the first knowledge an individual gains is in the apprehension of material

things by means of the senses. This is direct, and all accept it as real. The impression made on the mind by sight, hearing, touch, etc., is fundamental, and the conviction of its reality is irresistible. Every one in experience treats it as actual. It is the undisputed foundation of business and social relations. It is immediate, not mediate or proven. Nothing can be proven, as we have just said, without something known to prove with.

If there are systems of truth there must be first principles—necessary, universal ideas. Now can such realities be found and known? Not by reasoning, for a universal cannot, as has been said, be a generalization—it cannot be an inference from finite or limited premises. Universal ideas cannot be found by logic; that on which a system rests cannot be the product of the system. It cannot at the same time be both the foundation and the capstone. Universal ideas are *a priori*, they guarantee and verify the system, they do not flow from it. They are metaphysical, not relational. We hold there are and must be ultimate realities in the universe of being, or there could not be that which is finite and dependent. Let us examine this subject by specific discussion.

A certain class of philosophers tell us that we have no knowledge of substance, only of properties or appearances—that for instance matter *per se* cannot be found. If there be material substance we have no means of knowing it, they say; that in

regard to this mind is necessarily agnostic. We answer there cannot be properties unless there is something as the basis of properties, that in finding properties we find the substance. Properties are the manifestations of substance, the substance declaring itself. There cannot be properties floating about unanchored, they exist only as inhering in something. We say therefore that properties *imply* substance—that material properties *imply* material substances. The opposite of this is unthinkable. Nothing in knowledge can be more positive. There is no chance for a mistake. To say that we do not find the noumenon—the thing *per se*—only the phenomena, is to utter an absurdity, and there is nothing absurd in knowledge, "it is the agreement of the content of our conceptions with reality." It is impossible to construe in thought baseless properties. The mind necessarily repels as unreal foundationless properties. It is by means of them we find substance, and still further the nature of the substance. We penetrate to the noumena by perceiving the phenomena. Properties cannot exist without substance, and that which is necessarily implied must be real.

It is equally certain that there is spirit substance. Thought, thinking, implies a thinker. To say that there can be perception, memory, reasoning, knowledge of any kind without a being that perceives, remembers, and reasons is an unmitigated absurdity. Attributes or powers *imply*

substance possessing these attributes, and just to the extent of our knowledge of the attributes.

This form of knowledge we call intuitional. The reality is apprehended and known, not as an inference, but directly. It is intuited, it is seen at a glance, whenever the attention is called to it. It is thus evident that we do not as a result of a process find substance, or conclude there is substance; our mental gaze reaches it at once as actual and necessary. We may make mistakes in reasoning from false premises, or be in error in tracing relations, but we cannot make a mistake as to that which is necessarily implied. In this field therefore there is not only knowledge, but infallible knowledge. It is a first principle.

Let us look at *space*, another intuition. We define matter as that which has extension, as that which occupies space. If there be space, how do we know it? It is not substance, either material or spiritual; it has no content of properties or powers. It cannot be detected by any of our senses. Neither is it a generalization or inference, and if it exists as a reality it is not dependent on any other reality. It has not been created, and it cannot be put out of existence. It is and can be only a condition of the existence of material things. We say it is implied in the being of material objects, objects possessing length, breadth, and thickness. There could be no objects if there was not space. Some writers teach that space is

a relation, that until matter appeared there was no space, as it is, they say, but a relation of matter. They state what is true when they affirm that there could be no *here* or *there* were there no bodies. These words and conceptions—here and there—do express a relation of bodies, but that is place, and place is quite a different thing from space. But space is an antecedent condition of material things—without which material things could not have been—but place is only a relation of things existing in space. Bodies have extension, so space must have extension as occupied by bodies or a necessary condition for extension. While it is incapable of exhaustive division because it is illimitable—not only interstellar but extrastellar—yet there are relative distances of objects from each other in space so that light and objects consume time in traversing it. As such we know it with absolute certainty—implied in the existence of material things and their relations to each other.

Again, *time* is implied in succession of events. Like space, it is not an object of knowledge to the senses, or determined by reasoning, but is known as a principle fundamental to experience. We do not here use the term in the sense of limited duration in contrast with an unending future which is called eternity, but as a condition for succession for all finite beings in this life and in the future state. Under a law of cause and effect one thing precedes, another follows, and thus we gain the

notion of time, and of time as of longer or shorter duration. Nothing can be more certain than the reality of our knowledge as to time as well as to space. A minute, an hour, a day, a year, a century, conveys to us a meaning definite in character, of which we have well defined and indisputable knowledge. We have gained this knowledge through the successive moments which have occurred in our lives, and the numberless events which have made up the history of the world. We have not seen time, but we have traced events as they have successively transpired, and these events have required time. That events could transpire without time in which they transpire is unthinkable. This whole sphere of reality is therefore both clear and absolute.

CHAPTER XXVI

FOURTH FORMS OF KNOWLEDGE—(*Continued*)

(FIRST PRINCIPLES)

NOTHING originates without a cause. Now *causality* is not an object of sense; it is a truth of the reason, intuitively, immediately perceived. The mistake must not be made that we intuitively perceive what the particular cause of any and every

event is; that is not an implied truth, and may be discovered by sense or inferred in reasoning. To determine this we, in nature, appeal to science; in jurisprudence, to testimony; in medicine, to investigation and experience; in the traits of a nation to sociology, etc. In intuitive knowledge of causality it is not the assigning of the operating force but the perceiving and knowing there is and must be cause whenever any event or change takes place. The notion of causality springs up spontaneously, and as recognizing that which is necessary in a world of change and phenomena. No knowledge can be more certain than this, for it is absolute.

This kind of knowledge is not the first we gain in the order of time, but it is necessary for all other forms of knowledge. We perceive change before we get the notion of cause of the change, and in order to get this notion of causality; but when our attention is called to it we realize there could be no change without causality; that without space there could be no extended bodies; without time no events; without substance no properties. We find these metaphysical truths in connection with, and as essential to, all that we know through sense and reasoning.

In this kind of knowledge there is immediate certainty. That which brings a storm on some particular day, and of a particular violence, is often but partially understood, if understood at

all; but that there were forces in operation to produce the storm, and to make it just what it was, is known as an indisputable truth, and with unclouded clearness. That the sun shines in the heavens, that there is a substance giving off light, we know, though there is much about this light-giving sphere of which we are in profound ignorance. We know there cannot be redness without a substance that is red; that there cannot be a bitter taste in the mouth without a cause of such taste.

That there can be production without cause, properties without substance, bodies without space, and successive events without time, is unthinkable. We say, unthinkable, not as Kant maintains, because of the limitation of our powers—a display of our incapacity—but unthinkable as violating the laws of knowledge, unthinkable because of the nature of things. To say that two and two may be five is unthinkable, not simply as mental incapacity to grasp it as true—and that in some other world where there is a higher order of intelligence, it may be seen to be true, is to state an impossibility. Two and two with every one makes four—not five—because in the nature of things it must be four; even infinite power could not make it other than four, for infinite power could not make the absurd or impossible real. "Things that are equal to the same thing are equal to each other." "If equals be added to equals the sums must be equal."

"A straight line is the shortest distance between any two points." These are axioms and they are self-evident, not because of the peculiar constitution of our minds, but because of the absoluteness of the truths expressed, and being necessarily true the mind sees them to be true.

There are then ultimate realities which we find and know with unmistakable certainty. They are what may be called metaphysical truths—not inferred principles—but the basis of all contingent realities, the philosophical groundwork of such realities. They are not determined by reasoning, but are essential to reasoning. They are logical postulates, not logical conclusions; and without them reasoning would start in mid-air and leave us in mid-air.

Inferences in reasoning are largely probabilities accepted as truths, the opposite of which is not unthinkable though improbable. Laws rest on the basis of invariable agreement. When uniformities are observed they are suggestive of law, and when such uniformities are unbroken through a long series, they are regarded as establishing law. In this way, by induction, the laws of nature are determined. A single phenomenon never reveals a law; but it does not require a series of successive agreeing manifestations to establish the first principles of which we have been speaking. A single case is sufficient. It is not necessary that a thousand apples shall be seen to fall to the

ground to know that cause is at work; one apple dropping from the tree is as conclusive of causality as if all the apples in the orchard fell to the earth. If a man is found dead by the wayside we know there was a cause of death, but what the cause was we may never discover. Science, not less than the convictions of uneducated people, is based on the fact and universal prevalence of cause in this world of change.

Psychologically, that is, in the *order* of mental action, the concrete is apprehended before the abstract; things before the principles on which things are based; the object before the explanation of the object. And it is not held that intuitive truths are clearly perceived by every one, but that they are always perceived when the mind is intelligently turned to them. He who is mentally blind, or has his thoughts turned in the opposite direction, could not be expected to have these truths in his field of view. The knowledge of ultimate realities is not innate—born with the mind itself—but the powers by which such truths are directly apprehended are innate. When the favorable occasion arises they are not traced out and inferred, but seen as a necessity in the world of being.

Not only does reason assert that every event must have a cause, but that the cause must be adequate to produce the event. Extensive results can be brought into existence only by power in which there is corresponding energy.

CHAPTER XXVII

FOURTH FORMS OF KNOWLEDGE—(*Continued*)

(FIRST CAUSE)

THE fourth forms of knowledge let us into a wonderful field of reality. The senses, we find, are restricted in their range of action. Our reasoning powers make mistakes without number, and can never reach the broadest truths. Realities may be either too simple to be proven or too high for any possible demonstration.

Can God be found? His throne cannot be reached by the ladder of thought. Pile all the heavens together and they do not equal Him. Take the universe as your major premise and it is too small and too feeble to get the Infinite as a logical sequence. But to say that the being of God cannot be proven is not to affirm that He cannot be found; is not to affirm that He cannot be known with clear and absolute certainty—a knowledge that satisfies the highest demands of intelligence.

We find God as a necessity for nature, for all dependent being. However expansive the universe may be it yet has its limits. Matter possesses bounds, the orbit of each heavenly body has

definite extension, and the systems of worlds sweep on within restricted circuits. The forces operating in nature are interdependent, no one thing has supreme unlimited domination. The constitution and movements of the universe have had a beginning. The marvellous history of things as given in the Bible begins with these words, "In the beginning God created the heavens and the earth." Nature, then, according to the scriptures, is a creation, and time as measured by us had its beginning; in other words the order to which we belong began with the creation of these worlds. And science cannot be rationally interpreted without admitting the truth of this Bible record.

Nature is progressive, it has passed through successive stages, each of which has had a beginning and an end. Commencing with the present to trace back through that which preceded, we find ourselves in the midst of a period of vegetable and animal life. This period had a beginning. There was a time when there was no life, as now known, on the earth. The crust of the earth was barren rock, with bodies of water having more or less definite boundaries, and above it all a dense aqueous cloud through which the rays of the sun could not penetrate. At an earlier period still the surface was a molten mass, the heat so intense that rocks could not form, and back beyond this that which constitutes the earth and all the stars of the heavens was in a nebulous or gaseous state.

These things science tells us. If the physical history of nature has been progressive, going forward by steps or movements, passing from one stage into another, it must have had a beginning. We cannot divide the infinite into parts, there must be, in that which is divisible, a starting-point.

But it has been suggested that the present order of nature is only one of an indefinite number of cycles; that we do not find the beginning by going back to nebulous matter as the first in the order to which we belong. Suppose this to be true, a thousand cycles, a million cycles which have run their course do not relieve the problem. If there have been a million of cycles there must have been the first cycle. You cannot have the second of anything without there being a first; no more can you have the hundredth or millionth without a first. Lengthening the chain does not remove the necessity of a first link. And you cannot make a chain of an infinite number of links. There can be no such thing as an infinite regress of finite causes. Make the series as long as we may it must, in the nature of the case, have a beginning.

We are then shut up to this in studying nature, to throw up the problem as beyond solution or postulate an Infinite uncaused Being as the Creator of it all. For a conditioned there must be an unconditioned; for a contingent there must be an absolute; for finite nature a self-existent cause.

The opposite of this is unthinkable. He who does not find God back of nature, and as the Author of nature, not only does violence to the laws of thought, but sets at naught that which is fundamental to the most elementary principles of philosophy itself. A First Cause is implied in all secondary causes. Than this nothing is more evident. It is a truth in metaphysics which cannot be rationally disregarded.

Another thought, Everything in nature points to intelligence in the cause. The universe was not blindly brought into existence. It answers all the demands of our reasoning powers, and if it satisfies reason it must itself be the embodiment of reason. The manifestation of final cause is seen everywhere in the material world. He is blind who does not see a supernatural purpose in all things and operations that have made up the history of nature. Law conserving our well-being prevails all about us. Here we find an unlimited field of study for the development of the intellect; a theatre for the operation of sociological forces; an order of life for the strengthening of moral purposes under personal responsibilities; a condition of things calling for the discharge of duties; a world in which humanity may be enriched by acts of kindness and mercy, and a grand destiny wrought out in the training of conscience and the ennobling of life. We find the thought of the inventor in the adaptation of the machine he has constructed to some specific

end. The teleology of the arts enables us to penetrate into the intellectual energies of the race. We know what man has planned to do by scrutinizing the forces he has put in operation. And we come to the very life of the Author of nature by considering the realities and adjustments of these His works. May we not say that in these creations, as we study them, "we are thinking over after Him the thoughts that the Architect of nature has implanted in things."

As to some things we may be in doubt; as to His Being there can be no uncertainty. He is the Infinite, the Absolute, the Unconditioned, the Eternal, the First Cause. He is not unknowable, yet He is the incomprehensible. We find Him, but we cannot grasp Him. The infinite depths of His being we cannot fathom, but reason declares Him to be the creating life of all dependent reality. And we reach the highest range of thought in conceiving and knowing Him. We do and must hang everything on the will of the infinitely intelligent Creator.

CHAPTER XXVIII

THE SCEPTRE OF THE HEART

The definition of man that he is a rational animal is incomplete. It is sufficiently discriminating when he is considered solely in regard to his intellectual life, for in this, surely, there is a wide difference between him and the general animal kingdom. But it was intended that he should feel as well as know, and he would occupy a much lower position in the world of being than he now does, were his powers restricted to the capability of knowing. There has been a disposition to exalt his intellectual nature far above the sensibilities, making this the sole standard of rank. The word human, however, is shorn of half its significance when it excludes the heart.

Feeling is a mental state characterized as pleasurable or painful. It has special functions or offices in the body. As hunger, thirst, and taste, it impels to the supply of physical wants, and in the supply there is a feeling of satisfaction. The appetites operate through impulses thus awakened. In pain suffered there is warning of danger. But it is not our purpose just here to discuss questions relating specially to the body.

What we term experience is made up very largely

of feelings. It begins in early childhood. When but a few months old the infant manifests pleasure or displeasure in its surroundings, in those things which come in contact with its life. The smile which plays upon its face tells of happiness; the tears that flow speak of mental suffering. As the weeks pass by it is attracted by the novelty of the panorama of life. It soon comes to take an interest in that which is within its reach. It is not long before objects and experiences arrange themselves in two classes, the agreeable and the disagreeable. From this time on the child is in the midst of contending forces which give him joy and sorrow. It is along this path he must travel, smiling and weeping, till the end of his earthly pilgrimage.

So close to us are the sources of joy and sorrow, that we estimate life by the happiness or unhappiness it brings. Indeed with most people the end for which they plan and labor is happiness, or perhaps pleasure, which is on a lower plane. Even duty, nobility—often humanity—is kept at arm's length, for anticipated happiness is made to occupy the entire field. But this is true that it is either sunshine or clouds, depending on the pleasant or unpleasant experiences through which we pass.

Nothing binds us so closely together as the feelings we share in common. The companionship of spirit is the delight of social life. Not common aims—for these sometimes make competition—but

common enjoyments cement our affections. Conversation flows smoothly, and the hours pass by all too quickly when each is interested in the other. The world is richer because of sympathy, and it is impoverished to the extent of indifference. Love unites, hatred severs. History is a heart problem. The father willingly toils for those he loves, but when the heart is cold the fireside is neglected. When patriotism glows on the altar of a nation's liberty, the country is shielded from the assaults of the enemy. Ambition is more than a conviction of the judgment, it is a longing for perceived good. He strives for wealth whose heart is placed upon it. Scholarship is sought under the inspiration of desire, not simply from a correct interpretation or apprehension of its abstract worth.

To make a grand success of life as the years roll on, the individual must have sensibilities that are acute and masterful. They must awaken the intellect and lead it onward to mighty deeds. He who rises to a lofty eminence in the work of blessing the world, puts his heart in the lead in his search for the good of humanity; and he who plunges into evil, wrecking his life and ruining those who may follow, is led by the desires of his heart for that which is base and destructive. The church is the mightiest when she is in fullest sympathy with Christ. When great thoughts are impassive, they are like lead which drops to the earth; but when set on fire they burn through all

opposition. In business, in politics, in the professions, the feelings hold the sceptre. A motive for any activity of life does not reside in the object which it is possible to obtain, nor in the simple conception of its value, but in our emotional appreciation of its value. All interests wait upon the feelings, not a step is taken until inspired by the feelings. We eagerly pursue that which attracts by the promise of happiness; we flee from that which would cause us disquietude or pain.

Our attention has been called to man's high order of intellectual being, and it is said that "it is the mind that makes the man." But mind is more than intellect. Powers are one thing, the use of powers quite another. Intellectual energies must be stimulated, and the stimulus does not reside in these energies but is supplied by the sensibilities. For progress in knowledge, discipline of faculties, and accumulating power of achievement the heart must supply inspiration. The world is to-day what the heart has made it to be, and its future history will be determined by the feelings which sway the life of individuals and nations.

CHAPTER XXIX

FEELINGS DISCRIMINATED

We have learned that sensations are feelings originating in and through the body, and they have been considered in connection with presentative knowledge. But there is another class of feelings which take their rise in intellectual states and are the results of knowledge—not the medium of knowledge; they are the impressions made on the sensibilities by knowledge itself. The roughness felt when the hand is passed over a jagged surface is a sensation; the sorrow produced by the tidings of the death of a friend is an emotion.

Feelings which have a basis in intelligence—which we are now to consider—are generally called emotions, but these are sometimes subdivided, and designated *passions*, *emotions*, and *sentiments*. With this classification, emotions occupy the middle ground, as medium in intensity, while passions are violent emotions, emotions which have passed beyond restraint, and sentiments are emotions of a mild type. Passions are the whirlwind of feelings; sentiments are a gentle breeze, while emotions is a word which stands for the general body of feelings, capable of passionate

excess, on the one hand, or a gentle flow on the other.

A human being has an equipment of powers in the domain of feeling, not less than in the domain of knowing. On the sensibility side of his nature, life is generally spoken of as passive—it does not originate feeling, it is said, but is subject to it. It is true that there are limitations to the functions of the sensibilities; they do not perform their work alone. Without the action of the intellect there is no joy, or sorrow; these emotions come into existence only as the knowledge is gained of certain conditions or facts. The intellect takes the lead. But emotions do not flow into the mind, they are produced by the mind. And they are not the product of the intellect which is the organ of cognition, nor of the will. The sole office of the will is to choose and execute. There must be powers which create feelings as they do not exist till the mind performs its work of producing them.

Should we not stop and define feeling before proceeding any farther? It is not easy to give a strict definition of feeling. A definition is ideational, and we cannot put feeling into ideas and make them the medium of its transmission to others, as words embody and carry thoughts. Feeling has a meaning to him who has experienced it, and the best we can do is to awaken a consciousness of such emotional experience. So purely personal is it, with nothing of the cognitive in

its nature, that we can only refer to it, we cannot analyze its content with words.

And there are special difficulties in our way in studying feeling. To do this successfully we need carefully to examine it in all its grades. But when we begin to do this the feeling, in a measure, fades, our consciousness of it becomes dimmer; for cognition is called into action at the sacrifice of the feeling we have begun to study—there is to some extent a passing from feeling to thinking. Feeling is in no degree ideational, though the sensibilities and intellect may co-operate; but just so much of mental energy as is employed by the intellect cannot at the same time be employed by the sensibilities. The most that can be said of feeling is that it is the class of our mental experiences not included in cognitions and volitions; it is the residuum when these two forms are extracted from all our possible mental experiences; and it is the "subjective side of any modification whatever of consciousness." But though it will not in itself admit of scientific definition its nature is understood, and it is an object of intelligible discussion.

It is interesting to observe that not only can feelings be discriminated by words, but they often have physical manifestations. Embarrassment causes the face to flush with blood, and fear drives the blood from the face, giving it the paleness of death. The countenance brightens as joy takes possession of the soul; and in it sorrow is depicted

as the heart is sad. Tears trickle down the cheeks and the facial muscles undergo a change when life is overwhelmed with grief. Anger tells its tale in the expression of the face, in the tone of the voice, and sometimes in the violent use of the muscles in personal assault. Excitement causes the heart to beat more quickly, the blood to flow more rapidly, and the breathing to be irregular. Fear quickens muscular action so that the individual will hasten to get out of danger; but when fear becomes great it may paralyze the physical powers and make us helpless for personal escape or defence. Weariness gives way when excitement takes hold upon the nerves. The mother puts forth efforts for which a strong man is scarcely equal, to rescue her child from danger or death. Cases are frequent of death from fright. Great excitement has often stopped the beating of the heart. Some sudden intelligence—good or bad—has completely overcome vital action. Home-sickness may become a positive and dangerous disease, terminating in death. The insane, under intense excitement, and unrestrained by a sense of right or regard for legitimate results, will often concentrate far more strength in the muscles for violent action than can be done by the person of a sound mind holding the feelings in check. The curl of the lip portrays scorn; the pouting of the lips, contempt; the heaving of the breast, agitation, and the smile, gratification. The placid face shows a quiet spirit,

but when the heart is wrought into a fury the inner struggle writes its story on the brow. He who is angry finds it difficult to restrain the blow, but love impels the hand to stretch forth in acts of beneficence. Who can keep the features of the face immovable in the presence of a ludicrous event? At times laughter is irrepressible; at other times weeping cannot be restrained. Hope prolongs life, despair shortens it. Thus it is seen that feeling reveals itself through the physiological phenomena and controls physiological activities.

On the obverse side of this subject it is important to understand the effect of the body on the feelings. With a child in a state of health there is a physical impulse to action. Boyhood is buoyant, the nerves are thoroughly charged with vitality, and from this comes forth an inclination toward movement, and in the bodily action there is enjoyment. This enjoyment is not found simply in the products created, for in most cases nothing is constructed of value, but it is found in the doing itself. Disease depresses the spirits even when no serious results are anticipated. A dyspeptic stomache produces irritability. A sluggish liver makes a man down-hearted. Alcohol in stimulating the brain not only acts upon the reason but awakens all sorts of emotions. The exercise in sport is agreeable without taking into account the pleasure of winning. Over-eating deadens the sensibilities.

Indeed, physical habits hold our emotional nature in their grasp. The appetites take hold upon the soul and give a trend to its experiences.

While desires have an emotional element they often sustain relations to the body. They may be called craving feelings in contrast with affections which are giving feelings, as some writers distinguish them. Desires reach over to an object, their end being the drawing to one's self. When the desires have their base in the physical being they are called appetites. But desires may be what is called mental—to satisfy the mental, as for knowledge, moral good, etc. "Affection is inclination toward others, disposing us to impart from our own resources what may influence them for good or ill. Desires absorb, affections give out. Desires invariably seek what is accounted a personal gain." But affections are of two classes, designated benevolent and malevolent. Benevolent affections are satisfied only by the impartation of good; malevolent affections by the impartation of evil. Friendship and love show forth the benevolent, revenge the malevolent. Though contrasted with desires they partake, in part, of their nature. He who has an affection for another desires his good. Desires and affections are impulses to action. In the economy of life they serve this purpose. For the doing, impulses must exist to originate action and make it continuous.

CHAPTER XXX

EQUIPMENT OF FEELINGS

As feelings have a substantial basis in the mental life, as they serve a variety of purposes and indicate the special or general condition of the mind, also entering into and revealing character, it is well to give them a somewhat careful analysis. And especially is this desirable as they more or less modify intellectual states and reveal and perpetuate themselves in executive acts. Perhaps as instructive a classification as can be made is to consider them in their connection with the special objects to which they relate, or in which they manifest themselves. On this principle we state the following classes:

1. Egoistic Emotions.
2. Altruistic Emotions.
3. Intellectual Emotions.
4. Æsthetic Emotions.
5. Moral Emotions.

Egoistic emotions have their end in self, in connection with self-appreciation or personal desires, ambitions, etc.—in business, in the pursuit of scholarship, in the striving for position, in the love of fame. On the better side they show themselves in the satisfaction of duty performed; in feelings

of esteem based on the recognition of a right and worthy life; in acts of unselfish benevolence. Then there are unworthy egoistic emotions, such as pride, vanity, love of approbation, jealousy, emotions lying at the basis of haughtiness, of self-conceit, of pride of place and a pride of life. Situated as almost every human being is, depending on himself, it is natural, indeed, inevitable, that there shall be emotions of a personal character, many of which, if not excessive, cannot be condemned, and some of them are positively good. It is God's plan that man shall be industrious and create capital. The world needs capital for the support of life, for human progress, for the working out of a grand destiny. To desire to accumulate property is not in itself wrong, it is in harmony with a divine purpose; but to love money, to possess a spirit selfishly to hoard it is base and productive of harm. The appreciation of, and desire for, an education that the life may be stronger, that more of good may enter into our being is surely not unworthy. It is largely through mental culture and an extension of knowledge that the race is to fulfil its mission. We can scarcely do a better thing for a young man than to stir within him a thirst for knowledge. To understand God's universe; to see what good and evil history has wrought out; to become familiar with great themes of thought; to be able to fathom the world in which we live, is noble and desirable. But to be

vain over one's scholarship is to give an unfit appreciation to one's life. To be gratified by evidences of public favor is not necessarily wrong. The boy who says, "I don't care what people say about me," is standing on dangerous ground; he is likely to plunge into vice or squander his days in ignoble pursuits. It was not intended that personal considerations should be excluded from our lives, but that they should be lifted up above the plane of selfishness which disregards the interests of others.

Altruistic emotions are such as have their object or end in others. That in much of our experience these emotions should make their appearance would naturally be expected from our social nature and relations. We begin life in the family, amid the varied interests, dependencies, duties, and enjoyments of the home; we pass up through childhood and youth in association with the young; manhood and womanhood bring responsibilities and needs in a world of men and women. We are not alone, we are never independent and without duties to discharge. To attempt to live without taking others into account would be to contract our privileges and restrict our powers to our own great harm, as well as in disregard of the rights of the public.

There are many forms of altruistic feelings which grow out of our community life. Love starts in the home—of the parent for the child,

and the child for the parent—each interested in the other, and ready to make sacrifices for the other. Sympathy is a sharing in the feelings of another, "rejoicing with them that rejoice, and weeping with them that weep"—a delight felt in their happiness or good fortune, and a partaking of their sorrows. Pity is commiseration for another in view of his weakness or misfortune. Indignation is a feeling aroused by the base, unworthy, or perhaps cruel act of another. Revenge is a spirit of retaliation which prompts the doing of harm to the one who has wronged us, a malignant wishing of evil. This is often excessive, far beyond the measure of the offence. Altruistic feelings may thus show a noble or base spirit depending on the character of the end wished.

Intellectual emotions are not cognitions, but emotions awakened by cognitions. There is a satisfaction in every intellectual achievement. In knowledge itself there is not only an understanding of things, but a pleasurable state of mind in the act of understanding, and a satisfaction which knowledge produces having its type in the specific character of the knowledge itself. To learn, to intellectually master, is to triumph, and a feeling of victory is always grateful. Truth is more to us than a right conception, it brings delight. The character of the pleasure experienced is determined, in its quality, by the character of the truth reached. The solving of a problem in algebra

gives feelings of a different character and coloring from the grasping of a problem in physical magnitudes. Conceptions of those things which are vast and comprehensive carry with them feelings of the sublime. In these statements we speak of feelings which accompany and reside in the conceptions, not which flow from reflections on the purpose to which the knowledge may be put. The pleasure in knowledge and intellectual activity contributes an important element in mental work, making it attractive, and supplying inspiration out of which success is secured.

Æsthetic emotions spring from the perception of the harmonies of things. In the domain of the physical they are experienced in the views we get in painting, in sculpture, in the beautiful landscape, etc. Then we speak of the beautiful in character, which is a harmony of thought, of purpose, of habits, a conformity to intellectual and moral ideals. We are so constituted that the perception of harmonies stirs agreeable emotions which are *sui generis*, placid and restful.

Moral feelings belong to our moral nature. They depend on moral considerations and the activity of the moral powers. Sin, wrong-doing of any kind, is accompanied by a feeling of demerit, not simply a judgment of demerit. There is shame, remorse, perhaps contrition, at least disquiet, in which there is self-reproach, a feeling of debasement. But with right acts there is a feeling—as well as a

judgment—of rightness, emotions based on approval of deeds done and which attach themselves to such approval. The whole sphere of the emotions of a righteous man differs radically from the feelings experienced by a man of base thoughts and degraded life.

Such is man in his emotional susceptibilities. This discussion might be greatly extended if called for by the purpose of this treatise, but enough has been stated to show how important to each of us is the life of the feelings as appearing in the varied forms of actionof our emotional nature.

CHAPTER XXXI

CONTROL AND TRAINING OF THE FEELINGS

It is evident the feelings should not be in the mastery. The sceptre cannot safely be put in their hands. They render an important service in a subordinate capacity; it may be well at times to listen to their voice, but not to put them on the throne of power. And the feelings are not very obedient subjects. They do not quickly respond to the orders issued. They are responsive to conditions, but are not directly swayed by commands. We have said that the mind is active in feeling, that in all emotional experience feeling appears as

a product of intellectual activity. Yet, fundamentally, feeling is the passive side of our nature. It follows, it does not take the lead; it is dependent on other states. And while this is true it cannot be summoned into existence nor directly put out of existence. The will cannot arouse hate or love; it cannot call forth feelings of beauty or sublimity; it cannot stir within us sympathy or pity, hope or despair. The emotional life must be reached and governed through other channels of our nature.

Our feeling is along the lines of our thinking. There can be no feelings as to those things of which we have no knowledge, nor to which the attention is not turned. The intellect leads, it opens to us a domain for feeling. The feelings of the scholar are unlike those of the illiterate man; those of the lawyer unlike those of the physician; of the aged unlike those of the youth. He who has fixed his eye on Congress and thinks of nothing else than the means to be employed to realize his ambition, leads emotionally a life widely in contrast with that of the man who toils from morning till night for the sole purpose of getting bread for his family.

To change the trend of our emotions we must change the trend of our thoughts. He who enters into a new world of intellectual activity, finds a new world for the feelings. It will be impossible to keep the stains of pollution from the soul of that boy unless you can change his reading from the

foul novels he is devouring, or cause his imagination to be fed from other scenes than those supplied by the ribald song to which he is listening. The imagery of the intellect determines the emotional life. While therefore we cannot directly summon up feelings of any class, we can bring them into existence by the action of the intellectual powers.

In this is involved also the exercise of the will. The will can control the feelings through the intellect. The intellect has ears by which it can hear the order the will issues, but the feelings are deaf. Emotions know nothing about attention, the intellect only can take cognizance of any reality. By changing the attention, by turning the mental gaze from one class of objects to another, the feelings the former had awakened fade away, giving place to that which is appropriate to the new mental condition. Thus the feelings do not come and go without our power to control them. For them there is a personal responsibility. Contamination is in the heart, but it enters through the intellect which is so largely subject to the will. The child gets a right start when the home is pure; when wholesome reading is brought into the family circle; when school associations are moral; when his steps are not turned toward vile haunts and his education is not gained on the street. For a clean, upright life, right associations are almost omnipotent.

While the nature of the emotions depends on the kind of subjects which engage our attention, these emotions may be made to be more or less pervasive and intense. We may surrender ourselves to them, stimulate them, and make them practically our guide; or we may hold them in check. There is such a thing as emotional habits produced by constant emotional indulgence or supremacy. "The rolling of sin as a sweet morsel under the tongue," produces a permanency of sinful delight. Character has three constituent elements—principles, modes of life, and spirit of life. The principles are the intellectual foundation, and the mode of life gives rise to the spirit of the life; and when this is continuously in one direction it becomes nearly irresistible. That which is needed is that a habit of right emotional living shall become firmly established—to love that which is pure, to hate that which is evil; to rejoice in the good fortune of others; to sympathize with the afflicted; to delight in the triumph of right; to be gratified when virtue is in the ascendant. This is gained by the exercise of these emotions in connection with correct views to stimulate corresponding feelings.

Repetition in the domain of feeling is as potent as in the domain of thought. We may cultivate that which is the better, and repress, by discarding, that which is the worse. Moral stability is not purely of principle; in it there is a habit of

right feeling, the kind of emotions that are allowed to come regularly into the life. There is less danger of religious deflection in mature years than in youth if there has been a consistent religious experience, because of established habits of feeling as well as of thinking.

He who is wise does not allow his thoughts to carry him into dangerous fields of enjoyment, but stimulates an emotional interest in that which is pure and noble. The feelings are the "open sesame" into the great world of activity, whether good or evil. To lead a boy to enter a life of scholarship you must interest him in the themes of study. To touch the spring of industries you must interest the heart. To secure obedient service to the Supreme Being, the feelings must be aroused. The engine that propels the life along the road of virtue or vice, toward that which is noble or base, is fired by the feelings. Intellect does her work as the emotions arouse these powers, and the will issues her commands as the feelings prompt. The leverage in all movements is the emotions.

To educate the feelings we must employ them, we must guide them into right channels; we must, through the intellect, keep them in harmony with a correct judgment, with inspiring views, and noble aims.

CHAPTER XXXII

INVOLUNTARY ACTIVITIES

To will is to put forth some deliberative act with an end in view. As preliminary to the discussion of this power and function of mind it is well to look at some primary forces of life. All beings in the animal world come into existence with a tendency toward action. There are what are called impulses which "are activities which arise from some feelings of want." They are not forced into existence by something which is external, like sensations which come as a result of outward impressions on the nerves, but they spring up with the life from some need. They are fundamental psychical states—not developed conditions. They are the primary activities of life, inner motor forces or promptings, as, for instance, for individual defence, for seeking nutrition, for muscular action, for perception of surrounding objects, for imitation of others, etc. They are initiating energies in the animal system.

Instinct, though impulsive, is something more than impulse; it is not a random doing but a doing in which there is a "purposeful and seemingly intelligent character of resulting movements." It is a capability of producing definite and uniform

results which serve some special purpose. It accomplishes what, in a rational being we would call the work of, or creation by, ideas, and which would require consummate skill to execute. We do not suppose the honey-bee knows anything about the principles of geometry, yet the cells he constructs as a receptacle for the honey are of the only form to give the greatest strength with economy of space. The honey-comb is a marvel of practical engineering. Such cells are what the honey-bee needs, and just these works he instinctively produces, and nothing foreign thereto. Gathering honey he thus stores it away for future use, and this without any preparatory training. All of the same species of birds build their nests on the same plan and in corresponding positions, in which their wants are best subserved; the young, without experience, executing the work with no less skill than their parents. The beaver knows when, where, and how to build his dam, and never makes a mistake.

Now, instinct is not a knowledge of principles in science, philosophy, or the arts; it is not intelligence as to the use of the works constructed or the reason for the special mode employed; there is not in it a solution of the problem, why? but simply a feeling, or impelling force, to do what is done. There is "a purpose without foresight of end." Instinct is blind action toward some end. When we say instinct is blind we mean that the animal does

not have an intelligent purpose in performing the act to accomplish an end perceived to be desirable. Yet there is an intelligent purpose, but it is in the Divine plan, and the animal conforms to the plan without knowing anything about it. The purpose is definite and the ends wrought out certain, but the animal is only a machine working to the end simply under organic feeling, not by the light of intelligence.

Instinct has relation to species. One species has one form of instinct, another some other form, evidently adapted to its special needs. This is a beneficent provision of Providence. And as the care for the young is limited, the instinct is not developed by experience or culture, but is in full force at birth. The period of life of a large part of the animal kingdom is brief as compared with that of the human being, and therefore it could not wait for special training to prepare for gaining a livelihood; hence it receives at first a full equipment of powers to do its work. Also in the nature of instinct we see that only a limited progress in knowledge is possible. Civilization is a word that can never be applied to the general animal world.

Intelligence is in the inverse ratio of instinct. Man has much less need of instinct than the animal. He has been provided with only low forms of it because in the high sphere he is capable of reaching he will not need it, and it would operate

as a drawback. Could he gain skill without study ignorance would everywhere prevail, and indolence would secure a perpetual degradation of life. No being can be great without making himself great. He is therefore forced to depend on his own resources so that there may be a continuous development of his powers.

But man is not wholly a being of will; not all his activities, as we have found, are put forth and guided by choice. In his physical nature he is largely subject to that which is involuntary. Life would be impossible were not the action of the heart involuntary, and did not the breathing go forward without thought or supervision. Everything is arranged for the digestion of food, proper assimilation of nutrition and the rejection of that which would be hurtful, and all this beyond our dictation or observation. There would be great personal danger in trusting entirely to our judgment in partaking of food, so that the system makes its demand through implanted and awakened appetites. Were it necessary consciously to direct every step we take in walking we could do nothing else. This may be said to be semi-instinctive, a uniform tendency through acquired habit. Physical training developed the capability of walking which settled down into a habit regulating the gait. This holds true in most lines of action, as in penmanship, the playing on musical instruments, and the mechanical skill of the ar-

tisan. Developed mental tendencies may be put in the same class. The will does not take minute —only general—supervision. Movements become largely automatic.

However great the possibility of our mental life; however far-reaching the ends for which we labor; however comprehensive the plans formed and lofty our aims, in that which is immediate, in the labor of the successive hours the involuntary provides what is necessary to the steady, safe, and effective movements of the life. Impulses and instincts reach back into the domain of feeling, on the one hand, and, on the other, to the sphere of the will, the higher form of purposeful and intelligent life. They thus fill a very important place in our being.

CHAPTER XXXIII

WILL DEFINED

"WILL is the power of choice."

"Will is the power of alternate choice."

"Will is the power of self-determination."

These definitions vary in phraseology, but are one in meaning. In the power of choice there is necessarily alternation. There cannot be choice when there is only one possible course to pursue. To do under constraint is not to choose, but to be

forced. To say, therefore, that will is the power of choice, is to say that it is the power of alternate choice. In putting forth a choice the power of control does not extend beyond one's self; it has nothing directly to do with the capability of acting on others. In some cases such action may follow, but to determine to act on others, and then to put forth the effort to act on them, are quite distinct. Such action may be the outcome, but this is not a part of the original determination. Often after the choice is made, there may be inability to execute the choice.

To call will the power of self-determination is to assert the ability of personal control, the ability to originate personal acts and regulate our own lives. It is saying that we are not the sport of that which is external to ourselves; and it is also putting will at the head of our mental powers with an explicit office to direct the intellect in its thinking and to control the life, whatever may be the feelings experienced. Conceptions, good or bad, do not hold us in their grasp; and it is not the office of emotions to sweep us onward without any power of resistance, as the block of wood is carried forward by the flowing stream. There is a power within us, which is not that of cognition or of feeling, that directs us in our movements. This is what we mean when we say that the will—not any other faculty—is the power of self-determination, the determining energy of self. The mind is capable

of self-mastery; this is will or personal government. As Calderwood says, "The name will is used to indicate a directing, determining, or governing power belonging to intelligent life—a control over the varied activities within consciousness. Whatever may be the influence of will over our own organism, or more widely still, out upon the field of external relations and activities, the philosophy of control is concerned with the activities belonging to the inner life of the rational agent."

Whedon's definition of will that "it is the power of the soul by which it is the conscious author of an intentional act" is both broad in its sweep, and restricted to its direct office and work. It recognizes the intellect—in consciousness and intention—and makes will the regnant power of the soul. The will cannot act when the mind is in a state of unconsciousness; and it cannot act unless the mind sees some desirable or needed end to be reached. It does not act without a reason, and it cannot have a purpose without intelligence.

Writers have sometimes merged will and desire into one mental act, with only this distinction, that will is predominating desires, called will when the desires issue in acts. But to issue in acts something more than a craving is needed. There must be a command, a determination, an executive decision which in itself is unlike the feeling of craving, though naturally following it. But the will may even decide against the desires under some coun-

teracting feeling, such as prudence, a sense of right, a conviction of duty. As, for instance, a person may have an intense desire to visit the home of his childhood, even appointing the time for his departure; but finding it will work harm to some friend, he at last abandons the contemplated journey with feelings of great disappointment. It is often a bitter trial to decide against our inclinations, yet it is frequently done. The path of duty is often travelled with much of sorrow and many sacrifices, with the crucifying of desires. Desires solicit the will, but they do not always secure its decisions. Other feelings arise which, though less clamorous, make a more righteous showing, and win in the contest. In cases without number desires are made to yield, not simply by external force, but to voluntary choice. It is the safeguard of the individual and society that the will is something more than desires, that we can and do rise above personal preferences, curbing appetite, restraining longings, acting according to reason under principles of right and for the well-being of others.

We must not be understood as saying that will is independent of feeling, that it puts forth volitions in disregard of feeling and in its absence, but that it chooses the interests with reference to which it will issue its orders. There are impulses almost infinite in kind and number which belong to our experience, and the will makes a decision as to which shall be regarded. By none of these im-

pulses are we driven. Life is constructed on the plan that among them and over them all the will shall sway the sceptre of authority.

We must again caution the young reader against the fallacy of supposing the soul to be in any sense or degree divided into parts when he sees the words intellect, sensibilities, and will. The soul itself, we have before said, is an absolute unit capable of three different kinds of action—of knowing, feeling, and willing. These activities may be employed successively or co-ordinately. The mind that sees also feels and wills, and at any moment it may will because of its feelings and in regard to that which it knows. Neither one of these activities is ever wholly in a state of isolation.

CHAPTER XXXIV

DEPENDENCE OF WILL

In the general division of mental powers we always give will the third place. In their enumeration we begin with intellect, follow this with sensibilities, and mention will the last. This is not accidental or arbitrary, but indicates a relation. We must know in order to feel, and feeling precedes willing. By virtue of powers of perception and discrimination we gain knowledge; the knowl-

edge acquired awakens the sensibilities, pleasantly or unpleasantly affecting us, creating desires, aversions, or other forms of feeling; and under a consciousness of ability to secure good or escape apprehended evil a resolution is formed on the basis of such intelligence and the emotions that are aroused.

Mental action cannot begin with volitions. We cannot will until there is something before the mind to will about. There may be impulsive activities of the life, but not choosing. To choose we must apprehend realities and perceive values. In the order of appearing, volitions are a sequence to knowledge, that is, knowledge must go before. Thus there must be a world of reality discovered by the mind as a prerequisite to the action of the will. When therefore we speak of the independence or freedom of the will, as we sometimes express it, we do not mean that it is out of relation with everything else; we do not mean that its office is initiative in an ultimate sense, that it needs nothing precedent in order to perform its work. It must have something to act upon, an equipment of knowledge or nothing can be done.

In ordaining life the Supreme Being has put us in the midst of innumerable objects which make up the material world; surrounded us with laws and forces to which we are subject; established relations between us and other human beings, as well as nature within which we dwell. We are

never outside of these relations, and we cannot get away from them if we would. Whatever volitions are put forth are confined within this sphere of being; the will cannot transcend these limits. This is the first limitation. The second, more restricted, limitation is the scope of actual knowledge, or intellectual discerning, within this broad sphere. That of which we have no knowledge cannot be an object of will. The third limitation is found at the established boundary of our powers. If the object be out of our reach, if it cannot be obtained, it is beyond the sphere of our volitions. We cannot will the impossible. No one goes seriously to work on an air-castle. The child when he comes actually to know that the moon is more than two hundred thousand miles away does not attempt to grasp it with his hands. A man may will to endeavor to become president of the United States, but he cannot will—even after he has received the nomination—to be president. He may secure the coveted position as the result of his purpose to employ every possible means to obtain it. No one can will not to die, but he can will to resist the approach of death, and thus perhaps prolong his life. The fourth limitation is found in needed excitation of the sensibilities. Knowledge which leaves the mind in a state of complete indifference provides no occasion for will action. If that which is seen has no significance for us or for others—not an object of desire or aversion, not conceived of as a

benefit or harm to us—the will is not solicited, there is no reason for its action.

The fifth limitation appears in the nature of the will itself. It does not directly achieve results, but calls other powers into action for such achievement. It cannot create scholarship, but it can set the intellect at work to gain it. It cannot lift a weight from the ground, but it can stimulate the muscles to perform the needed task. It is true it sits on the throne and the other faculties of the mind are its subjects. It is its office to issue commands, and obedience follows. Yet its monarchy is not absolute but limited. It cannot frame decrees without the aid of the intellect. It does not possess wisdom in itself. It turns to the faculty of cognition for enlightenment and to the sensibilities for solicitation or incitement, as a preparation for its work. It is a dependent ruler. It has ministers of state with which it cannot dispense. Should the intellect withdraw its teachings and the sensibilities become deadened the will would be powerless, its kingdom would perish.

He who says that he never changes, that the volitions of yesterday answer for to-day, proclaims his folly. If intelligence were a fixed quantity as a result of omniscience, then volitions might be infallible. But the most learned are relatively ignorant, and progressive intelligence should furnish ample reason—in more enlightened views—for new and more rational volitions.

CHAPTER XXXV

MOTIVES

MOTIVE is a word of Latin origin (*movere*, to move). In the domain of human activity we use the term to express the cause of, or reason for, a voluntary act. As we grow up from infancy to years of observation and knowledge, we find ourselves surrounded by objects varying in their nature, possessing unlike qualities, adapted to different interests of our being, or capable of doing us harm in a variety of ways. We find also that what we need most has not been prepared for our use, and can be gained only by personal effort. It soon becomes apparent that the field of effort does not belong to us alone, that there is a strife of competition which limits our opportunities, calling for the exercise of thoughtfulness and wisdom in our movements. In an important sense we make the world in which we live. That which is most valuable we do not inherit; it cannot be bequeathed to us, it must be wrought out by us. The widest distinctions in the lives of different individuals are not forced upon them, they are not the result of conditions beyond their control, but of the course they choose to pursue.

Among the many things it is possible to do-

which shall be done? A selection must be made. One form of good may be secured by taking one course, some other form by taking another course. If it be the desire to make money, how can the end most certainly be reached, by entering what line of business, by adopting what method in business? A thousand questions demand an answer. Life is an intellectual inquisition—what, how, when, to what extent, etc? This inquisitional movement runs through all business, the professions, education, politics, social life, ethics, and religious interests and obligations. And the outcome depends on the motives by which we are influenced, to which we yield.

A motive is a perceived appreciated good, the end for which a thing is done. It is that which we have in view in performing any act, the reason for the doing, that which leads to the choice made. When there is no motive, there can be no choice. In the absence of an end, or when there is an utter indifference to the end, the mind is not led to put forth any action. In a motive there is both an intellectual and emotional element. But by affirming an emotional element we do not mean that the sensibilities must be greatly agitated; they are impressed sometimes in the direction of prudence, or right, or duty, or of well-wishing for others, but not necessarily strongly excited. It is the nature of all knowledge to be accompanied by some form of feeling, though it may be so placid as almost to

escape notice. That which is desirable or worthy not only secures a favorable judgment but a favorable feeling also.

What is the exact relation of motives to the will? We have said there can be no choice without a motive, and that the choice must be in the direction of some motive. But motives are often antagonistic, they stand opposite to each other—to do *this* or the *reverse of this*, to do *this* or *not to do it.* There are always before us opposing or diverging motives. Some writers tell us that in the midst of the conflict the will is governed by the *strongest* motive. Is this anything more than saying that the motive that prevails is the motive that does prevail? That of course would be tautology and could not be disputed. Or is it meant that motives govern the will, that the motive which prevails does prevail because in itself it is stronger than any other motive, and hence the will is overborne by it? In other words, that the will is not free, and is swayed by motives according to their strength, not its strength or choice? This last position we cannot accept. The motive is the occasion of the volitions put forth, a reason for the mind choosing to put forth such volitions, but not a compelling force. The power is in the will, not in the motive. The motive solicits, the will accepts or rejects the solicitation.

That the power is in the will is evident when it is noted that the will can make or modify motives,

causing them to be more or less prominent, more or less attractive, more or less weighty. The mind can turn the attention on a motive, study it, unfold its value, increase its significance, and, in doing this, neglect the opposite, which thereby fades from view, diminishes in its influence, losing much of its soliciting power. We exalt the one, we depress the other. Now this we are constantly doing. We say, "I will look into this thing. It seems to have decided merit, but my opinion may change on closer examination."

In everything relating to the operation of the mind we appeal to consciousness. In consciousness we perceive what the mind is doing, and the causes which operate. We discover whether the act is the result of a choice or the consequence of a force applied; whether we really follow an invitation or are driven. And there is a universal conviction of freedom in the movement of our lives. If the will is not free we take credit to ourselves when we should not, and condemn ourselves without reason; there can be no ground for praise or blame, there is no such thing as merit or demerit, right or wrong, virtue or vice. The whole attitude of the public toward the supposed character of deeds done would thus be based on a radical misconception of their import. Jurisprudence proceeds on the supposition and belief that the will is free. Governments everywhere recognize this, and rewards and punishments would be

worse than a senseless play if this were not so. This, then, is the conclusion we reach from the study of the mind—in the light of consciousness—that the motive solicits, it does not force; it makes a bid, it does not issue a command. And we may add that we are wise or unwise, according to the class of motives to which we listen and whose solicitations we regard.

CHAPTER XXXVI

VOLITIONS ARE CAUSED

In affirming that will is self-active, do we exclude cause? In saying that knowledge does not create choice; that motives, compounded of intellectual and emotional elements, do not bring resolutions into existence; in saying that desires or any other form of feeling do not compel will-action, are we putting the will outside of the field of causality?

The stone lies unchanged in its position on the ground till some force is applied for its removal. This applied force is a cause of the change. The ball would never leave the cannon's mouth without a cause acting upon it. The attraction of the sun is a cause constantly in action producing the curved orbit of the planets, without which their movements would be in a straight line through space.

The rain falls to the ground because it is made to fall. The air and moisture and warmth of the sun's rays are the operating cause of the putting forth of vegetation in the spring of the year. Everyone knows that the steam-engine, the telephone, the automobile, and the entire world of mechanical arts have come into existence because they have been brought into existence.

But not in the same way, by the application of force, has the will been made to originate volitions. There is nothing back of it, outside of it, and foreign to it, that has compelled its action. What it does it does itself, and from within itself, by a power it possesses to bring acts into existence. Its work springs from its own energy. Yet we lay down the proposition that though the will be free, all its volitions are caused; that in the realm of mind, not less than in the realm of nature, there cannot be anything new—any change—without a cause.

But it must be noted that we do not always use the word cause in the same sense. Writers speak of "efficient cause," "final cause," and "formal cause." By "efficient cause" we mean the agency or force by which a change is produced. The illustrations already given belong to this class. The forces operating all through nature—in the changing of the seasons, in the flow of water along the river's bed, in the growth of vegetation, in all the phenomena of the physical world, are mani-

festations of efficient cause. But "final cause" is quite distinct from this; it is the purpose, the end for which an act is performed. It must not be confounded with the means employed to reach an end, but it is the end itself, the purpose preceding the employment of means, and which leads to the employment of means. This is the initial and inciting cause in a rational life. Our acts are not forced into existence by some power we cannot resist, but are put forth because of some good, some desirable end to be obtained. It is the answer to this interrogatory word, *why*. *Why* does the farmer summer-fallow his field? The reason for it is the final cause. *Why* does he practise rotation of crops?—The final cause? *Why* does the young man go through college?—The final cause? *Why* does Mr. A. enter the ministry?—The final cause? *Why* has Mr. B. gone to Paris?—The final cause? *Why* have the American people established a republican form of government?—The final cause? Why do men put their money into farms, merchandise, railroads, bank-stock, or make any kind of investments? There is a purpose, a final cause. A choice is made in view of some perceived good or advantage. Without the perceived good there would be no choice, the will would be inactive. The mind perceiving and appreciating, chooses. Did it not perceive the good, there would be nothing to choose, and hence no possible volitions.

There is another form of cause to which we have alluded, that is necessary in order that the effect may be what it is. This we have called "formal cause," a *plan* for doing. It answers to the word "*how*" in what manner? Not by what means, for this is efficient cause, but according to what plan? We cannot will to do anything unless there is some conceived mode of doing it. Thus, it will appear, there are three steps. (1) The end to be accomplished. (2) The mode of reaching the end. (3) The means employed for realizing the end, according to the mode determined upon. Take as an illustration the manufacture of a watch. As preceding the use of machinery in constructing the watch there are two requisites. (a) The purpose or end to be realized, a watch for keeping time—this is the end or final cause. (b) A knowledge of mode of procedure, the conception of plan, with the skill to execute the plan—this the formal cause. (c) And then comes the employment of means for the construction of the watch according to the plan. This is the use of efficient cause. It is the practical mechanical part of it all. Now without final cause—the end or purpose of the work—there would be no such thing as the construction of a watch. And the will carries into results the purpose formed according to the plan followed. Here is a watch: it did not come into existence without the operation of a cause. Without an end to be realized there would have been

no volition whatever in regard to a watch—the watch would never have been produced. Without a final cause or desired end there could not be either formal or efficient cause. Thus in rational will man lives on the higher—the highest—plane of causality. He sees, knows, and executes. No round in the ladder of life—in our ascent to lofty and noble manhood—can be more important or effective than this. We choose by virtue of what we perceive; we thus, of ourselves, originate movements.

CHAPTER XXXVII

THE SYMMETRY OF MENTAL LIFE

As for the intellect, there is no realized objective reality without the will; as the will is valueless without intellect, and neither can achieve full results without the sensibilities; and as the sensibilities would have no field of operation without the intellect, and would utterly break down without the will, it is of the highest importance that these energies of mind be put in complete adjustment, each rendering service to the others. Together they constitute the trinity of powers, and all their work is done in co-operation. As neither can do without the others, it would be folly to attempt to establish an order of relative importance.

It is true that greatness and non-greatness are terms applied to the intellect, goodness and badness to the heart, and efficiency and non-efficiency to the will, and all of this with some degree of appropriateness; but the intellect alone cannot be great, nor the will mighty. What we desire to enforce in the present chapter is the need of strict proportionality in the development of mental powers.

It is admitted to be a manifestation of weakness when life flows principally along the channel of feeling, not acted upon by the intellect nor restrained or guided by the will. This is an abnormal condition, and results in a disordered life. There are multitudes of people who live for pleasure. They seek excitement, and are miserable without it. So eager are they for this that questions of duty are pushed aside. They wish to be amused, they cannot endure that which is thoughtful, especially when it involves any measure of sacrifice. In all this there is selfishness, crucifying every noble impulse.

Then there is with many persons a morbid enjoyment of the sentimental. They delight in the tearful, are never so happy as when weeping; they seem to be very sympathetic; their hearts bleed for those in sorrow. But this, too, is a manifestation of selfishness, a sort of rapture of pity or grief. That it is unwholesome is evident from the fact that this class of people are not impelled to

administer relief, but are utterly disinclined to seek out the afflicted with any beneficent purpose. We find such persons among confirmed novel readers. They live in a world of the sad or tragic in fiction, but refuse to go forth into the real world of suffering men and women to carry light and hope and deliverance. These persons do not live in the sunlight; they do not want it; they dwell by preference in the dark shadows, in the self-deception of a mock virtue of sorrow for others. A life like this is wholly worthless. It does not lead on to deeds of bravery or generosity; it paralyzes the will and keeps the intellect in the background. It is simply a drifting on a sea of excitement. The highest purpose of the sensibilities is to cherish feelings in harmony with cognitions—appropriate to cognitions—inciting the will to act in achieving what the intellect makes known as privilege or duty.

There is still another class of people who are almost utterly emotionless. They are cold and stoical. The survey of life with its misfortunes and tragedies makes no visible impression on them. They sternly move on in a passionless tread whatever scenes stir the public. This does not give the highest type of humanity. They are wholly unlike the Man of Galilee who was arrested by the cry of the blind man; who was moved by the voice of the weeping Mary; who shed tears over Jerusalem as He saw its impending doom ap-

proaching. He was not less a loving companion than a mighty leader.

Great intellectual powers cannot be a substitute for fine sensibilities. Indeed the more massive the powers of thought, the deeper should be the fountain of feeling. He whose mental vision is narrow does not see much to stir the soul; but the man who can go down into immense depths of thought; unravel the great mysteries of being; take, in the sweep of his vision, a universe of reality and truth—the man of mighty grasp of intellectual power—should, to be perfect, possess sensibilities not less comprehensive. Greatness must have eyes, not only, but ears to hear the song of rejoicing and the wail of humanity; it must feel the significance of knowledge; the heart must be as expansive as the intellect.

But he who has an acutè intellect and lively sensibilities needs also a responsive will. Perhaps there is no defect more common than weakness of will. People generally know what is right and perceive that which is best, but very commonly do not rise to the effort needed for achievement. Indolence and will do not clasp hands. It is more difficult to execute than to feel. The will must not court ease; it must not woo pleasure; it must not despise hardships; it must possess unfaltering energy; it must not tremble in the presence of danger, but wield a sceptre that cannot be wrested from the grasp. That is perfection of the will that

acts up to the highest ideals of intellect and responds to all the normal impulses of the sensibilities. It is free when it is rational; and it is mighty when it rules. It must say both yes and no; yes, when it should choose action; no, when it is solicited to do that which is unwise or improper. Hence fullest knowledge should be sought, right sentiments cherished, and rational choice made; and when the choice is made, nothing should be allowed to deplete the energy of execution. Power is largely a might of will, at least a consummation of the energies of personal activity.

CHAPTER XXXVIII

CHARACTER

Character is the quality of one's life. This is a broad statement, meaning not exactly its content, but its forces in kind, in degree, in their established trend. It is distinguished from the mental life conferred at birth, yet not so much by knowledge and experience, though there is a world-wide difference here—as by habits formed. In character we are what we make ourselves to be. The word is usually understood to have a moral significance, as between selfishness and unselfishness, virtue and vice, high and low aims, purity and im-

purity, freedom from or subjection to debasing appetites and passions. Character is acquired, it is not inherited; it is a personal trend established by successive agreeing activities. A single deed, good or bad, does not make character; it is only as the mode of life becomes habitual, showing a uniformity of inclination which we follow, that character becomes actual.

What are its elements; how is it produced? It is spoken of as the creature of the will. We establish our life by successive operations of will, in the choice made, and the direction we give to our powers. This is true, but volitions alone do not make character. Character comes as a *reflex of all our energies* which the will directs, to which it gives employment.

1. There is in character an intellectual element. Nothing can exert a more potent influence over us than the thoughts we permit to enter the mind. They constitute the objects of attention; they supply the world in which we live. Whether they come from nature about us; from text-books in the schools; from the papers and magazines read; from literature or science or history; from addresses delivered on the platform or sermons from the pulpit; from novels or philosophical treatises, our thoughts are interwoven in our lives and furnish the basis of all our mental and physical movements. Man is as his thoughts, the themes he considers, the breadth of intellectual comprehen-

sion, and the imagery which these themes hold up to the mind. If the thoughts are great, there is greatness of mental powers; if they are vile, there is depravity of such powers. If there is inability to forge grand intellectual conceptions, the life cannot rise higher than the plane of its mental workings. An individual can be good, but not great unless his mental energies are capable of a high order of work. He who wields mighty blows in the handling of truth, shows, on the intellectual side, the capability of a grand personality, if his energies are constantly in the right direction. In the making of character the intellect should not be eliminated from the problem. The race will never be lifted up to as high a plane of being as it should reach, it will never be able to display a character of the greatest merit, without the general prevalence of intellectual culture—only indeed as the people become thoroughly educated.

To guide the mental forces is a prime necessity in the lifting up of each generation as it makes its appearance. Illiteracy opens the way to personal and public dangers without number. Right citizenship calls for culture; strong, rational governments cannot do without it; freedom can be maintained only as the people are intelligent. No great movements in behalf of reform or in the direction of human rights can be carried forward to large success unless the brain is clear and knowledge is at the helm. To have a basis of power in

character, a soul with the firmest fibres for steadiness of life, as well as might for consistent influence, the realm of thought must receive attention. Manhood is a life of reason—without the rational there can be no manhood. Character is that which has become habitual in the life of a rational being.

2. Another element in character is feeling, and when indulged it has a decided tendency to become habitual. It has already been said that motives are made to be motives through the feelings which objects of interest awaken within us. Every appeal made to us, in business, in scholarship, in the political, social, or religious world, finds its way to the sensibilities, otherwise it is utterly fruitless. Right feelings eventuate in right deeds, and to make the life consistently upright, there must be uniformly this class of feelings. Thoughts never move the will without the co-operation of the feelings. There is no potency in a right judgment or a notion of expediency, but when the judgment or the notion awakens an interest, when the heart becomes involved, then the will issues its orders. Were it not for the feelings midway between the intellect and the will, there would be an impassable gulf. Feelings bridge the chasm. Hence the habitual in feelings establishes character on the line of the feelings. And the character is worthy just in the ratio of worthy predominating feelings.

3. Will is the centre of personality; its office is to rule over the life. Character, we admit and af-

firm, is the product of the will. As it chooses and directs is the character that is built up. But it performs its work by its control of the thoughts and feelings. It should regulate the thoughts with infinite exactitude. It should reject all themes that are base; it should discard everything that would contaminate the imagination or load the memory with polluting scenes. It should not permit the puerile to engross attention. It should establish a high plane of intellectual effort. It should regularly restrain the intellectual life from that which is harmful, and constantly lead it up toward the higher realms of truth and knowledge.

It should carefully guard the sensibilities that vile imaginings be excluded. It should create a tendency toward the monopoly of the life of the spirit by emotions that are consistently elevating and refining. It should hold the feelings with such a steady hand that they gain the habit of operating uniformly in the domain of what is noble and exalted. Thus character is made, and is as lofty as it is persistent.

CHAPTER XXXIX

TRAINING OF THE WILL

In the training of the will the end sought should be a habit of making right, prompt, and vigorous decisions, the giving to will a ready and effective supremacy. It must be borne in mind that no power can be trained alone. The problem is a mixed one. With the end in view of developing and guiding the will, several considerations should receive our attention. We first refer to the fact that indecision often grows out of intellectual uncertainty. He who has no opinion has no plans to execute. Convictions of judgment must precede acts relating to judgments. There can be no inspiration for the doing where clouds obscure the vision. Acuteness of intellect, knowledge firmly in the grasp, gives a distinct basis for will-movement. And when the interest felt corresponds with the knowledge gained, the antecedent to will-power is complete. In the training of the will for the best and most rational service, several forms of discipline are needed.

1. There should be a conscientious purpose not to allow the will to shirk its responsibilities. A habit should be gained of completing thought with action. Disinclination for any reason should be

overcome. No break should be allowed this side of duty done. Life would be truncated, not carried out to a rational whole. To be perfect, we must do as well as know. With many people there is both the spirit and habit of executive indolence. The will is thus feeble and becomes more and more flaccid. It should be like the well-trained team of the fire department, springing forward for its task when the alarm is given. To allow thought and feeling to evaporate into thin air is to make will nearly a nonentity. Putting it out of commission is to give it no place in the battle of life.

2. The will should be trained into a spirit and habit of promptitude. Some people seem to be governed by the principle of never doing to-day what can be put off till to-morrow. In business always behind; in meeting an engagement invariably late. "Oh, plenty of time!" Napoleon swept over Europe because he was always ahead. "Striking while the iron is hot"—not after it cools off—fortunes are made. "Pretty soon" is failure. The boy who begins life with methods of procrastination will be a toy in the hands of fate. The student who neglects his lesson till just before the hour for recitation may, perhaps, be graduated, but with meagre scholarship. The moment a debt is due is the moment to pay it. As soon as duty calls is the time to respond. Holding one's self to the resolute purpose of prompt and unflinching execution of plans formed, the will rises naturally and

easily to all the demands made upon it. It becomes reliable and certain along the lines of its training.

3. The will to be trained so as to become mighty must have vigorous employment. Solomon never spoke more wisely than when he said, "Whatsoever thy hand findeth to do, do it with thy might." The decisions rendered should have a strong fibre. "I rather think I will do this or that" breathes an air of feebleness. Planting one's feet firmly is a preparation for the strife. Indecision is a listening for the command to retreat. Greatness is never gained by tentative efforts. Doing becomes grand when the whole soul is thrown into the work. The weather-vane tells the direction of the wind, but it has no power to regulate its course. By vigorous use, acquiring the tendency to will strongly, life becomes almost irresistible. Be not content to possess passive virtues; act aggressively; accustom the will to put energy into its decisions, and it must triumph.

4. Never allow the will to falter, though experiences be trying. He who can "swear to his own hurt and change not" has a conscience and will that do not swerve from duty. To bring the will into a state that is ready to do difficult things is to secure efficient training. No test is better than this, and no process more effective in working out positive results. "A remarkably successful business man," says Halleck, "said he had divided all

persons into two classes; those who did what they promised or were directed to do, and those who returned with some reason why they had not done it. When he employed persons he always set them certain hard tasks at the outset. If they returned with a reason why they had not done it, he dismissed them. In this way he surrounded himself with an unusually fine set of employees on whom he could depend." "Nothing schools the will and renders it ready for effort in this complex world better than accustoming it to face disagreeable things." Professor James advises all "to do something occasionally for no other reason than they would rather not do it; if it is nothing more than giving up a seat in a street-car. A will schooled in this way is always ready to respond, no matter how great the emergency. While another would be still crying over spilled milk, the possessor of such a will has already begun to milk another cow."

Not only to secure power should will be trained, but that it may be guided in the right direction. We do not here speak of unprofitable choice, unsuccessful choice in money making; in the gaining of a livelihood; in the employment adopted; this is usually, if wrong, an error of judgment, a fault of the intellect; but we speak of decisions involving right, relating to the true office of the will. When personal interests say one thing and right the opposite, what shall the will do? He who is

true to the best ideals will make the sacrifice of personal advantage and profit that justice and right may prevail. It is just here that people fail more than anywhere else. The mightiest will is that which enforces principles of equity whatever may be the bearing on individual interests. To be able promptly, unhesitatingly, and easily to do this, displays a will of the highest order. To secure this should be the aim of every young man and woman. When this becomes an accomplished fact the world will have reached a state of moral perfection. Righteousness is a creation of will.

CHAPTER XL

THE OFFICE OF CONSCIENCE

The organism of life, we have seen, is exceedingly complex. Each individual is a composite unit, endowed with diverse powers. Can the members of the human family, thrown out together on the field of competitive activity, be kept from destructive antagonism? Will not strife, bitter and interminable, be a certainty? Will not men jostle each other, getting in each other's way, unrestrained except by fear? The ability to know, to feel, and to will, if this be all, cannot establish harmonious relations; they do not set in operation

a working plan in which agreement will be realized. Knowledge is not a competent arbiter in the midst of selfish interests and inordinate greed. And feeling left to itself will lead away from righteous ends; while will is lawless, except under restraint. The race is sure to be a failure unless there be a standard of right, a clear moral vision to perceive the standard, and a force acting on the life in the direction of right. God therefore has provided man with a conscience as a regulating energy, supplying a need vital to his well-being as an individual and as a constituent of the race.

If the word conscience is made to stand for the complex psychosis of the moral force within us, it expresses three distinct operations.

1. It is the power of making moral distinctions, of perceiving there are two opposite qualities and spheres—right and wrong—in the moral world. It is a power by which the moral law is recognized. In a sense it is a moral legislator, not exactly enacting the law, but bringing it within the scope of reason, finding it as a universal principle, and therefore as universally binding. This ability to make moral distinctions is not gained by training; the law is not a generalization, an inference based on an agreement or uniformity found by means of a multitude of observations on the part of each human being; but there is in the mind a power of intuitive perception of rightness, a power to recognize right, long before the child is

able to find a sufficiently wide basis for this universal distinction. Right is a first principle, but inferences or generalizations are derived.

2. The second form of activity of conscience is what may be called the moral judgment, not finding the law, but judging of the quality of acts by the law. While the former has the force of legislation, this is judicial. In the act performed the law is obeyed or violated. As, for instance, in what I did was I honest or dishonest? Was I justified in making the statement which I made? Is it right for me to vote this ticket? Is the business in which I am engaged a legitimate one? To ask if I can conscientiously do a particular deed is to raise the question of its agreement with the law of right. It is a judicial inquiry in the field of morals. And it is intended that this function of conscience shall be constantly in operation. It is the exercise of judgment in the moral sphere. To find the law is one thing, to judge acts by the law is quite another.

3. The third form of mental action in conscience is emotional. We here have moral sentiments. They are feelings which attach themselves to moral judgments. The condemnation by the judgment of an act as wrong carries with it a feeling of condemnation. With an approving judgment there is associated an approving feeling. The judgment and feeling cannot be dissociated, they cannot be separated by a period of time. The

emotion is not felt in the absence of the judgment though it may exist in different degrees of intensity in relation to the act, or judgment concerning the act. This emotional force is subject to great variations. It may be acute; it may be dull; it may be intensely awake; it may be nearly asleep; it may be sensitive; it may be seared over; it may be an accusing energy; or it may be in a state of indifference. It may be quickly responsive or slow in its movements. It may be persistent in its demands or yielding to opposing forces.

The purpose of conscience with its three-fold functions is the regulation of life on lines of right, justice, and humanity, so that duties may be discharged, obligations met, and wrong find no place among men. No provision could be more complete. A law of moral distinctions universally perceived, and as a law being a universal imperative; the ability to judge of the moral qualities of acts constantly brought into operation; and an emotional energy prompting obedience, making life miserable when moral judgments are disregarded, and peaceful and joyous when the claims of the law are regarded and its voice listened to, such is the combined force seeking to rule in the breast. In loyalty to conscience humanity reaches its highest condition of excellence; in disloyalty there is debasement of life, and it may be a degradation leading to ultimate ruin of the soul. Without conscience there would be no restraints from wrong,

society would be torn into fragments; more than this, every man's hand would be lifted up against his neighbor, and earth would be a pandemonium. To live here at all as a race, with social and business relations, under government for protection, with associate interests calling for co-operation, conscience is an indisputable requisite. At every turn we make we need its voice to guide us, and to be able to see the sceptre it wields.

CHAPTER XLI

THE TRAINING OF CONSCIENCE

It is unfortunate that the practical authority of conscience is not equal to its rights. It is born a King, but like many another sovereign it has rebellious subjects. If set to be the ruler over our lives it ought to possess qualifications of the highest possible order; it would be well, indeed, were it infallible. But is it not infallible? We hold that it is infallible as a legislator, or in other words, in bringing to us a moral law, for there is no race, no tribe, no individual however uneducated that does not intuitively apprehend moral distinctions. Without instruction, at the very opening of human intelligence, as we have said, the child proceeds on the basis—the practical theory—of moral order

under which all deportment must come. This is never imparted as a tenet of belief, as a truth to be learned, but all instruction given assumes this as an innate qualification, an existing preparation for moral judgments. We say to the child "this is wrong," but we never say there is such a thing as wrong.

In the exercise of its judicial functions in settling the question of the right or wrong of specific deeds—that is, in the domain of moral judgments —conscience is not infallible, it often makes mistakes. We not only, from a lack of knowledge, frequently misjudge other people as to their purposes, the character of their acts, but we may wrongly render a decision in regard to our own deeds. We may conceive an act to be humane which is not humane, or to be harmful when it is a blessing. Our ability to judge depends upon our knowledge, which is not a fixed quantity, and certainly is not without limit. Omniscience alone is beyond the possibility of error in judgment as to the quality and bearing of every act. We therefore say that conscience, as moral judgment, can and ought to be educated. It should daily gain more skill in determining the nature of the relations in which we live, and the bearing of our acts upon others. And we should seek to sharpen our powers of moral judgment so that they shall quickly respond when a question of right is raised. This is a court into which every deed bearing on our relations to

our fellow-men should be brought. The most reprehensible of all methods of procedure is the common exclusion of our deeds from this court. The inquiry which the soul should make of itself at every step in life is, what shall I do for my neighbor—in this world of business, in this world in which relations are intertwined, in this world in which each is dependent on every other member of the race? Yes, the moral judgment can and should be educated.

As to the emotional functions of conscience, the aim of which is to secure the execution of moral judgments, are they susceptible to training? There can be no subject for inquiry more important than this. Does the education of the moral judgments cover the whole ground? We have said that moral sentiments, as to kind, will be in harmony with the decisions of the judgment; they attach themselves to and support the judgment. But the emotional state of the conscience may be more or less vehement, more or less importunate, it may more or less fully rise to the demands of the judgment. There is a great difference between a slight uneasiness of feeling and remorse; a degree of disquietude that calmly chides and that poignant horror of the soul which drives "sleep from the eyes and slumber from the eyelids." The training of this energy of the conscience is like the training of any other mental susceptibility or power—it is effected through rational employment. Suppressing feel-

ing when it ought to have place in the life will deaden its force. Persistently refusing to carry out the decrees of the judgment will gradually result in less disquietude of soul. On the other hand, living up to the claims which conscience makes, regular obedience to the commands it issues, will keep it alert and make it just and forcible in the fulfilment of its office. Treat conscience rightly; appreciate at their full value the judgments rendered; loyally carry these judgments into execution; let the sentiments in behalf of honesty, virtue, fair dealing, of all human rights, and the divine claims, be regarded as a precious possession of the soul—an expression of humanity itself in its best mood—and conscience will unfold not less perfectly and grandly than any other energy of your life under the best conditions of progress.

But if conscience be not perfect, why say it should be obeyed? There must be supremacy lodged somewhere, and if not in conscience, in what other faculty of our being? Were we to say that conscience might be disobeyed, it would be holding that it would be right to do what at the time we thought to be wrong. We are not now considering absolute relations, but the principle by which we are to be guided. We desire, it is assumed, to get as near as possible to the right in our deportment. The way is plain. Employing the light we have in making a decision is doing the best we can do. That answers the demands of conscience for that

particular deed. But still it may cover up wrong, it may be in violation of important relations, for we may have carelessly or wilfully neglected to obtain the light needed to make the right decision. We do not thus meet our entire obligation in making the decision, and can justly be held responsible for the inability that had been self-incurred. But when a person says I am doing the best I can, what more can be asked of him? Nothing more can be asked for that moment, but there may be shortcomings in the past which enfeebled conscience, unfitting it to give utterance to that which is nearer the absolute standard of right. Hence, though conscientious, we may be guilty, not because we follow conscience—not in the following of conscience—but because of previous dereliction in not educating conscience. He who is conscientious in what he does, and scrupulously educates the conscience in making right judgments and cherishing right feelings, will constantly grow up toward a perfect life.

Conscience is sometimes called the voice of God. It does make its appeal in behalf of right; it is loyal to the principles of truth; it makes its decisions in the interest of righteousness and universal humanity, and it echoes the feelings of the Divine Heart against wrongs of every kind, and in favor of a life that ever looks toward holiness and heaven. Give to it absolute authority.

CHAPTER XLII

THE POWER OF CONVICTIONS

The high order of powers with which God has endowed the race supplies an equipment for the accomplishment of great results. And conscience holding the scales of justice provides a regulating force in the employment of these powers. Is anything further needed to secure the largest achievements? While conscience stands in the defence of right, it may be purely repressive. Forbidding that which is wrong, it may fail to stimulate to action. It may utter its prohibitions with great force, yet leave the life stationary. As a propelling energy, if much that is of value be done, there must be positive and strong convictions. By strong convictions we do not mean a sanguine temperament. This may be helpful or harmful. While it awakens anticipations of good, it may put too much coloring into life.

Convictions stand over in opposition to uncertainty, inappreciativeness, slight estimate of values. It is not frivolous, or easy-going; it takes a serious view of things that are important. It is faith in action. It is the intellectual life holding with a firm grasp the realities on which it looks, and with an intent gaze. Under its influence whatever is done is done with a will.

The young man in college who looks upon a liberal education as of great worth, will become a scholar. His hours will not be squandered; he will throw his whole soul into his work, and will make the sacrifice necessary to carry out his plans. Student life in our schools falls below what is possible, just to the extent that low standards prevail. He who is in college because his parents send him, or because he would be glad to have a reputation for scholarship, or because of the prominence of athletics, will never take the lead in mental pursuits. But the young man who is deeply impressed with the conviction that learning is worth more than money, more than any other earthly good; whose thoughts and plans are dominated by an overwhelming desire to dwell in the temple of truth, will overcome all difficulties in his search for knowledge.

The majority of people take the world easily. They must labor or starve, but they are most happy when the demands made on them are the least exacting. They do not enter into the spirit of industry; they are not eager for the strife with nature's forces in the feeling that they have a mission for the development of the age in material resources, or in the wider interests of a genuine civilization. Too much is the individual lost in the mass; we are swept through life by the momentum of the tide of humanity, instead of exerting a personal influence in shaping affairs. Nothing to do but to move on with the crowd! Hence it is that

the few make history, the few only who dig out the channels in which life—industrial, civil, and religious—moves.

We make the assertion that great changes have been wrought on the earth less through favoring conditions than by the power of deep-seated and engrossing convictions. And again that great achievements have been made only as the soul has arisen in its might, with a consciousness of personal responsibilities, or such a conviction of power as to control all the energies of life. Patriotism is the mightiest impulse in an army because it is the heart that quickens the nerves, supplies undying tenacity to the will, and makes the cause for which the army is battling more precious than any other interest.

Pick out the leaders in the great world movements of the ages. They have been men and women who have believed profoundly in what they were doing, and were heroes before they struck a blow. Paul knew he was set for the regeneration of the race when having heard the voice of the Son of God from the skies he was commissioned at Damascus to go forth as the messenger of truth. He had asked the question, "What wilt thou have me to do?" and so thoroughly is he dominated by his convictions that he cries out, "Woe is unto me if I preach not the gospel." Luther became invincible when his eyes were opened to the enormities of the doctrines and the practices of the

Church, and he found himself alone in the thick of the battle. A man who can face an empire without the quiver of a muscle; who so thoroughly believes in the righteousness of his cause that he can unflinchingly cry out, "Here I stand, I can do no other," cannot easily be trampled under foot, and hence the revolution of the sixteenth century. I do not know that Joan of Arc held a divine commission, but she did not doubt she was called to deliver her people, and the world was astonished by her military achievements. They call Edison the wizard, but a man who is so deeply engrossed in his studies as to be utterly oblivious of the flight of time, who works on till the morning dawns, and for weeks and months hides himself from the world, retiring from all human companionship that he may talk with nature, cannot be defeated.

No man is mighty in the pulpit who but half believes the Bible. The young man who says, "I can," makes destiny. "This one thing I do," controls fate. Napoleon's belief that he was a man of destiny made him irresistible, and he invariably triumphed till recklessness took the place of rational convictions. The pilgrims' trust in God led to the braving of the perils of an unknown sea, and the redemption of a continent from the barbarism of savage tribes. Wealth flows into the lap of him who with heart devotion intelligently concentrates his powers on the work of money-making. The summit of influence and power is gained by him

who with unfaltering steps climbs the mountain-side to greatness. He who doubts leads a strengthless life; but the man who has intense convictions of duty, profound convictions of power, throws might into his movements and snatches victory even from the hand of adversity.

CHAPTER XLIII

THE SPIRITUAL

When we say that man possesses a spiritual nature, we do not mean simply that he is a spirit in contrast with matter, or that he possesses energies of thought, of feeling, and willing which are unlike the properties of material objects; but that he is endowed with susceptibilities of being impressed by the supernatural, and with powers to reach out and find God and commune with Him. And in asserting this we are not considering God as known in metaphysics, a necessary cause for all finite things, a fact which the scholar determines as a foundation of conditioned being—a cold intellectual affirmation—but as a power which even the unlearned, who know nothing about metaphysics, have of entering into God's presence and holding converse with Him. The intellect tells us about God; our spiritual powers find Him.

The conviction of the supernatural is universal. No tribe of men has ever been found that did not conceive of a life beyond the present. Though not comprehending God's Being and plans, yet in all ages men have stood in awe of Him, and have sought to placate Him, or secure personal favors. Wrought into our life, then, and as a part of our life, there is a reaching out after God. This lifts up the race to a state of dignity and opportunity it otherwise could not realize. Most wonderful is man in that for him—because of the range of his powers—there is provision for divine companionship.

Whatever may be said of the lower animal world as to powers of knowing, remembering, and reasoning, it has no apprehension of the Eternal Spirit. Its intellectual nature does not reach up to the plane where the Infinite dwells. Nothing is so wonderful as that our life can touch God's life, that there is direct communication between Him and us.

Some have held that worship is ignoble, adoration unbecoming to man's dignity. Is patriotism unbecoming, is it degrading to shout for our country's flag? Is the love of the child for the parent, a love that leads to joyous acquiescence in the very wish of the father or mother, an evidence of personal degradation? To pay to the Supreme Being the highest honor the soul can render, is this a stooping of manhood? Is it degrading for

the needy to acknowledge his wants; for the ignorant to ask for wisdom? Is it belittling for the sinful to seek for help that he may rise above his sinful propensities? Is it not, indeed, the highest act of a human intelligence to adore God as the Eternal Spirit, possessing all knowledge, holding in His hands the destiny of the universe, omnipotent and omnipresent, beholding the end from the beginning, fathomless in His love, infinite in His mercy, perfect in all His attributes? How exalting true worship is! It requires the loftiest powers of cognition. There must be the ability to conceive of and know God. We cannot worship the unknowable. And then there must be a spirit of fidelity to the relations we sustain to Him. He is base in whose heart dwells disloyalty to truth, to love, to justice, to mercy, to that which is complete in power and goodness, which is the fulness of divine life.

There are two or three facts that must not escape our attention. He in whose breast spiritual forces are deadened lives on a plane far below ideal manhood. He has an emasculated nature. He has parted with the richest of his endowments. Gratitude to the Divine Being is a loftier act, and is more meritorious in spirit, than gratitude to any earthly benefactor. To recognize the continuous beneficence of our Heavenly Father is more rational than the fullest appreciation of any favors the public can bestow.

The office of rational worship in exalting the life is seen in the practical workings of the Christian religion when preserved in its purest spiritual state. There is no other form of civilization to be compared with Christian civilization as a development of human life. Here power is organized in its largest proportions; governments come the nearest to the line of equity; humanity has its richest flavor; homes are most peaceful and happy; intelligence bears widest sway, and personal rights are most fully regarded. And when any community is most completely under the power of a spiritual life, all forms of evil are lessened, and vice hides its deformed head.

The spiritual completes the manhood and restores the divine image. Without it this would be a world utterly lost. It is the great conservative power for right. God must touch human hearts or society is a failure. Tear out from the soul the fibres of the spiritual and ruin would speedily follow. Quicken and deepen the spiritual forces and right would wield a mightier sceptre, and the nature of man would become richer in all that is good and lovely. In the spiritual is found man's highest excellence.

But to give the spiritual its greatest power, the intellect must do its best work, the heart offer its richest oblations, and the will hold the soul most inflexibly to duty. That religiously there is advantage in intellectual culture is apparent when

we remember that all truth is of God. The more we know, the better we understand His works, and the more thoroughly we discipline our powers, the greater will be our ability to reach up toward the Infinite. The culture of the heart affects a spirit of reverence for truth and makes it more ready to submit to its sway. The will taught to choose right and duty, so as to incline the whole life thereto, puts the soul in a state of loyalty to the divine government. The spiritual, in building up our being, requires all of these, using them as its servants, making them the foundation of its temple of perfection. He is the best Christian who knows the most of God, adores Him with the most ardor of soul, and keeps nearest to Christ in daily companionship.

PART SECOND

PHYSIOLOGICAL

CHAPTER XLIV

INTEGRITY AND DIFFERENTIATION OF THE BODY

It is impossible to understand the human mind without embracing in our studies the functions of the body. It is especially necessary to trace the relations of the nervous system to mental forces and activities. This we have done in our exposition of the first forms of knowledge. As mental manifestations first appear in sensation and perception; and other forms of knowledge in their development rest back on the energies thus awakened; it is impossible to take the first step in the unfolding of the science of mind without a resort to principles of physiology. This we have considered so far as the discussion seemed to require. There are other physiological facts and conditions which call for exposition in order that the subject of manhood may be properly rounded out. It is not our purpose to write a physiological treatise, but to supplement what we have said by the statement of such facts as directly bear on the right methods of living.

An individual is defined as "a single person incapable of separation or division, without losing

its identity." It therefore possesses unity. The unity of the body, however, is unlike the unity of the mind. The body is composite, while the mind is non-composite. The body is capable of division into parts, mind substance is incapable of such division. The mind is an absolutely inseparable entity with differentiated functions only; the body consists of parts, and the functional differentiation is the location of specific energies distributively in these several parts. The eye is a medium of sight and the ear of hearing—here we have structural differentiation as a necessity for functional differentiation — but it is the whole mind that sees through the eye and hears through the ear, the differentiation being only functional. In this we find a wide contrast.

There is one part of the bodily structure which in the universality of its functional operation approximates somewhat the functional office of mind: we here speak of the nervous system. The sphere of service of the muscles is limited, of the bones is limited, of the hands and feet is limited; but the nervous system presides over the whole body, gives life to it all, and supplies every part with the energy of sensation. But this even is localized in the specific offices served. Sight differs from every other sense, and performs its office through the optic nerve. Taste is a special sensation for which special nerves in the mouth are supplied. In bodily differentiation, therefore, there are spe-

cific organs to which are assigned special offices in the economy of life and mode of action.

While mind and body are interdependent, neither in the economy of nature existing without the other, and in many respects neither performing its work without the co-operation of the other, yet bodily defects, when they exist, are largely local, but mental defects impair the whole mental being. The hand may be amputated without harm to general bodily health. The ear may be deafened without impairment of other organs. Indeed, when one organ is rendered useless, some other organ is often quickened and made more serviceable. When sight fails, hearing may gradually become more attent. But a mental weakness is a limitation of mind energy for which there is no substitute. Feeble powers of perception work harm to the imagination, to memory, and even to thought itself in the absence of material for thought.

Yet there are great laws which run through the bodily structure as well as the mind. The same general principle operates in development, a law of growth by use. The mind is built up by the gaining of knowledge—the development and inherence of knowledge; the body by the supply of food which is incorporated into the physical structure. Continuous mental inaction produces mental weakness; bodily inaction enfeebles the muscles. The mind needs rest from severe effort, and in a like manner the body; but in each probably the

danger is from too great nervous strain. In nutrition, the food supplies waste, which is constantly taking place—for bodily structure parts with constituents of its being in the energies exerted. There is no such thing as mental waste, as a law of being. Knowledge gained may become unconscious, but it is not lost; it comes back into consciousness when favorable conditions arise. Mind is intended to be accumulative, growing in knowledge and might, expanding in its life through the entire period of its existence. The body, however, reaches its largest power in a few years of time, and then passes down a declivity of energy and service, ending in death.

We devote a few chapters to discussions which have to do with the physiological side of our being as affecting mind and character. In this world we cannot live as mind alone, our personality embraces both body and spirit in mutual action and co-operation.

CHAPTER XLV

THE CARE OF THE BODY

While caring only for the body defeats the purposes of life, its neglect, even because of an absorbing interest in the operations of mind, is productive of harm. "A sound mind in a sound

body" has been a favorite motto. We may push the thought a little further and say that mind efficiency, in the fullest sense, cannot be obtained without a body both sound and trained for co-operation with the mind.

The first thing to be considered is health. Many persons become enfeebled because of excessive labor. There is something wrong in our civilization when individuals must either shorten life by too exhaustive labor or die from starvation. This is not accounted for by a lack of business capacity. Making full allowance for this there are many who are crowded into conditions of ruinous competition and robbed of the natural fruit of their toil. The woman who makes shirts at six cents apiece is not to be set down as an incompetent, but as a victim of rapacity. And she must toil through the night if she would live through the day. There are multitudes of people who cannot get out from a state of degrading servitude, many of whom deplete their powers of resistance to disease, and die a premature death. Social conditions which admit of this industrial trend, and which lead to it, need a reconstruction.

There is an opposite tendency, especially with certain classes. Persons of sedentary habits, or those having employment in forms of industry which do not call for physical effort, are quite likely to neglect physical exercise. Book-keeping, typewriting, office work of any kind offers temptations

to general physical inaction, with a tendency to bodily harm. The traditional college student was pale of cheek, with hollow eyes and bent form. He was said to have an intellectual look because the physical had faded and left but the shadow. What was the cause of the evil? Not, usually, overstudy, but the absence of provision for obtaining physical vigor. But it is found that scholarship does not require the sacrifice of muscular energy. Indeed the best mental results are compatible only with the strongest physical integrity. The general introduction of athletics into our schools of learning has not, it is believed, depressed the mental tone of student life. Nowhere do we find young men with better physical development than the majority of college graduates. The Senior ought to be, and can be, hardier—having more of muscular energy—than when a Freshman. What is needed in a college graduate is manhood, stalwart in both body and mind. This achieved and the true ideal is realized. But the best results are commonly not fully reached. At present there is danger that some will draw too largely on their physical vitality, and others wholly fail to participate in athletic operations. One class of students is employed in the doing, the rest in looking on. And they who are set to uphold the athletic standing of the institution, not unfrequently, by over-exertion, incur personal harm that entails suffering through life. A

college "Coach" said to the writer that footballists almost invariably incur some permanent disability. Now arrangements will not be perfect till the entire student body regularly participate in athletic movements. The gymnasium makes provision for this, but its work is usually confined to the winter months. It is of the greatest importance that all the young people of our schools—of higher and lower grade—be supplied with systematic physical training, that in youth the symmetry of the entire person may be secured and thereafter preserved.

As allied to the foregoing there is the subject of regular—or irregular—personal habits. Young life generally is able to withstand much of physical strain. There is usually a large supply of vitality; the building-up forces are strong, and they quickly respond to the needs as they arise. Recuperation readily follows the excessive taxing of the muscles and nerves, and derangement of the powers is ordinarily soon corrected. There is a stock of energy on hand to meet emergencies. We begin life with a large physical capital on which we can draw in the important business of living. But this capital is not inexhaustible, and ought not to be used up more rapidly than is necessary. And it cannot be kept from rapid depletion without rational habits of life. Habits consist of an order, an established uniformity, as we have said, a settled trend in living and doing. Right habits are a

safeguard, a right tendency promotive of harmonious action. Now these habits ought to be developed in every young man and woman. The exuberance of young life creates an inclination to break away from that which is regular, the stepping over rational boundaries; introducing infraction of physical laws. Every violation of nature's requirements brings its penalty. Drawing on our reserves may not immediately produce bankruptcy, but it uses up capital. We pay for all we take.

Eating at irregular hours, and then between meals; retiring for rest at ten o'clock, or not till two in the morning; breathing the fetid air of close and crowded apartments; the neglect of frequent ablutions; the pampering of the appetite with rich food taken in large quantities—the being governed by inclination, disregarding the normal functions of the body, will be sure to work irreparable injury to the physical manhood. Conscience and common-sense should govern in the care of the body, even as in the great interests of the soul.

CHAPTER XLVI

BRAIN FORCES

Attention has been called to the fact that the nervous system ramifies throughout the entire body, and sustains important relations with every muscle, bone, and membrane of this organic whole. The brain with the spinal cord as its extension, is the central organ of this system. "The neural matter of the organism in general is of two sorts—the white and gray matter. The white matter is fibrous in structure, even where it lies in masses; the gray matter is cellular. The nerve-fibres and trunks consist of white matter. The spinal cord and the medulla consist of both—the white outside, the gray within. The cerebellum and the central hemispheres also consist of both, but with them the gray is outside and the white within. The central mass, which presents a number of distinct organs, consists of the two kinds of matter variously intermixed. Apparently the function of the white fibrous matter is to transmit impressions; that of the gray cellular matter is to receive, transform, and emit impressions." (Davis.) Through the gray matter mental functions are performed.

"The human nerve-centres are surrounded by many dense wrappings, of which the effect is to

protect them from the direct action of the forces of the outer world. The hair, the thick skin of the scalp, the skull, and two membranes at least, one of them a tough one, surround the brain; and this organ, moreover, is bathed by a serous fluid, in which it floats suspended." (James.) Equal care is observed in preserving from harm the spinal cord, which extends along a hollow or tube of the vertebræ that comprise the spinal column. These vertebræ are articulated so as to produce flexibility—for the bending of the body so necessary for free action.

The brain is pre-eminently a mind organ. It consists of three lobes, named respectively, the cerebrum, the larger and frontal division of the brain, through which evidently consciousness and will are realized; the cerebellum, lying underneath the back part of the cerebrum, which conserves combined muscular action; and the medulla oblongata, that part of the posterior brain which is connected with the spinal cord and has to do directly with the vital functions of the body.

As a being capable both of intelligence and locomotion there is provided for man two sets of nerves, sensory and motor, connecting the brain with the rest of the body. The sensory nerves are nerves through which sensations are produced, and impressions carried to the brain. It is their office to communicate intelligence of the state of the body, and of external objects affecting the body.

It is by means of these nerves that sensations of temperature arise in the skin, or pain is experienced from a cut or bruise. The special senses of sight, hearing, touch, taste, and smell belong to this class. The motor nerves act in response to the sensory, carrying the mandates of the will. They set the muscles in motion in view of tidings received. For instance, the ear reports the door-bell ringing, and the brain sends a message, through the motor nerves, to the feet to move to the door, and to the hand to open the door. The eye announces approaching danger, and the brain directs us to repair to a place of safety. Thus we act intelligently in regard to the affairs of life.

It has before been said that on the nerves every part of the body is dependent in its organic life and the performance of its special functions. Not only do the muscles receive impressions through the agency of the sensory nerves and put forth effort by means of the motor nerves, but all waste in the body is repaired and its normal state maintained from nervous stimulation. To be, as well as to feel and act, requires neural influences. In the human personality the nervous system sustains the closest relation to the mind, and is the most vital portion of the bodily organism.

The body in every part is constantly undergoing change. It will be remembered that growth is not an accumulation of organized matter as a permanent deposit, but in the very process of living there

is molecular disintegration of organic structure. That there may be permanency, there must be change; to live is a process of replacement of the old with the new. As the stream ceases to be a river when the water stops flowing, so the death of the body takes the place of life when normal change comes to an end. The organic becomes inorganic, that the organic may be preserved by a continuous process of building. And to the influences effecting this tearing down and building movement the nervous system is peculiarly sensitive, and in this performs a distinct office.

The brain as the medium or instrument of mental operations is an organ of special interest. While the rest of the body undergoes changes dependent on physical movements, the brain is subject also to a law of mental activities. It is conceded that there are physical equivalents of mental forces, that the consumption of brain material is in proportion to the energy or volume of mental action through the brain, whether intellectual, emotional, or volitional. Every movement in thought or feeling or willing is accompanied by a corresponding modification of brain-cells. As brain force is used up—represented by devitalization of cell material—there must be a corresponding production of brain energy or the tone is lessened. This can only be effected by the consumption of nutritious food. The brain must be fed or it cannot do its work, and if the supply be not main-

tained, mental inefficiency follows. Yet excessive eating imposes an undue amount of work on the system, putting a strain on the vital forces, and to that extent making an overdraft on the brain. The mind is dull after a heavy meal because the brain must send an extra amount of assistance to the stomach to effect digestion. But, on the other hand, care must be taken that the brain be not robbed by the lack of nutritious food.

It frequently happens that students in college, by practising great economy, ruin their health. Sufficient food, cooked in a way to be most nutritious, is of the first importance. All brain workers need to take pains with their diet. Severe manual labor is trying to the body, but not less exhaustive to the system is intense mental work. It makes its draft most directly and exclusively on the nerve forces, which are fundamental, both to physical development and strength and to mental achievements. The man who leads a professional life, or handles large business interests, or carries heavy responsibilities of any kind, should not fail to supply the brain in proper quantity with the nutriment needed for its highest efficiency.

CHAPTER XLVII

DEVELOPMENT IN THE FIELD OF THE PHYSICAL

When the human body has reached what we designate as maturity it has not, in many respects, come to the limit of its development. While the bony structure has secured its growth, the muscles have attained their final length, and the general contour of the body has come to a state of relative permanency, modifications may yet take place which will have marked influence through the years which follow. Our life, physical as well as mental, never reaches a fixed quantity. The young man at twenty-five years of age who has dwelt within a home of ease and luxury, is but a tender plant compared with the son of toil. The sledge of the blacksmith knots the arm and converts the muscles almost into ribs of steel. The athlete gains power to achieve and endure that fills us with amazement. He who is to perform feats that require special physical effort must pass through consecutive training. The need of this is realized in the army, in college sports, in all the movements which put unusual strain on the muscles. While the arm becomes helpless by nonuse, it develops extraordinary power by continuous and vigorous employment.

The susceptibility to modification is found in almost every part of the body. Thus there is what is called physical education. The gait, in walking, is acquired. The muscles have been employed in a way to establish a special mode in the movement of the body. While this rests back, perhaps, on physical structure, it is largely artificial, produced by the character of employment followed, or is the result of special training.

Skill in any branch of industry is not a gift of nature but an acquisition through personal training. We do not leave nature wholly out of the account, but we supplement her powers; we take what she gives us and bring it under control, and fashion it according to our needs. In this way we gain the ability to perform most delicate operations. This holds true in the entire range of the arts. With mental conceptions holding up the ideal, the hand works out the product sought. It acquires facility of operation which becomes a permanent endowment.

No child writes a beautiful and regular hand at first; and though much depends on the tone of the nervous system, yet every individual, by taking pains, can work out any form of penmanship he desires, and make it natural. Nothing shows the pliability of the muscles and their response to ideal conceptions more than the accuracy of touch of the keys of a musical instrument when the hand is not even guided by the eye. Some of our most

skilful pianists are blind. The delicacy and precision of movement would be almost beyond belief had not our observation established the fact. The violinist does not specifically and in detail will the vigor of action or the angle of application of force, but the hand under general volitions produces in succession the exact tones he seeks.

The human voice yields to the guidance given it and there come forth tones of a quality just fitting the sentiment uttered. A trained singer, in the fulness of expression and in the restraint required, charms us as it is impossible for the uncultivated voice to do. The skilful elocutionist has gained the ability to accomplish two results, first to read the actual meaning into the text he renders, and second, to modulate the voice in harmony with the thought delivered or sentiment expressed. The former is mental, the latter is both mental and physical. And it is possible for the training to be so complete that the voice will perform its work with great precision without thinking of the tones which should be uttered.

Some, if not all, of the senses can have their acuteness increased. The Indian sharpens the sense of hearing by so generally depending on it for the information he needs. He puts his ear to the ground and detects the approach of the enemy though far away and out of sight. Indeed, in his savage state, the ear renders him better service than any other sense. He has no optical instru-

ments to reveal objects at a distance, such as civilized people have constructed. Hearing is his special resort.

With the blind the nerves of the skin become exceedingly sensitive. They gain the ability to detect the presence of objects as they approach them from the resistance of the air.

The body should have its training school, but not for overtaxing special muscles, of which there is danger. There is a development in strength, in acuteness of perception, in accuracy of execution by the experiences through which we pass. It would be well for us to study the law of physiology, and submit to training that will bring out, for largest use, the forces implanted in the body. Efficiency would be gained, and our physical being would become a more complete servant of the mind. The body should be kept in health and be made responsive to the demands of the soul in this complex world of matter and spirit.

CHAPTER XLVIII

PERSISTENCE OF DEVELOPED FORCES

THERE is a proverb—perhaps not very good English—that runs in this wise, "Like parent like child." There is much that is mysterious in life, nothing more inscrutable than the operation of the

laws of our physical being—involving the mental as well. Accepting the tenet that in the origin of the family of man there is unity, that Adam and Eve were the first pair, and that therefrom has come a race in which exists infinite variety, we find that we are in a field which it is impossible fully to explore. There is every form of diversity among human beings, in size from three feet or less, up to seven or more feet; in the same family some are tall, others short. The color varies from clear white to jet black, with every conceivable intermediate shade. With some there is a tendency to obesity, while others are but little more than a shadow. In features there is every possible contour of the face. It is very rare indeed that persons look so nearly alike as not to be distinguishable. The full-blooded African is not more unlike the Caucasian in color than in the shape of the nose, the prominence of the lips, and the contour of the forehead. The Negro type is a marked departure from that of the white race, and yet in itself is subject to wide diversity. The same principle holds in all races.

These differences can proximately be traced to known causes. Races with a black skin have their habitat in the tropics. While historical proof that the dark color is due to the climate of these lands cannot be adduced, as history does not go back to the beginning of things, yet two or three facts cannot be disregarded. The first we

mention is that the rays of the sun, especially when accompanied by excessive heat, darken the skin. The white man who for weeks and months lives, on deck, the life of a sailor, receiving as reflections from the water the rays of light and heat of the sun in large measure, will have all the exposed portions of the body darkened. And the longer such exposure continues the more set the color produced. That the dark color should become permanent when a race dwells continuously in a land of the brightest sunshine and most glowing heat for thousands of years, with the absence of clothing and shelter, especially with habits of uncleanness and gross forms of diet, this it is not unreasonable to expect. The bestiality of life in uncivilized lands is also known to modify the color of the skin. The unwholesome and meagre diet of the poor in our cities makes its mark upon the face in driving away the natural color and the healthy expression which good food and correct habits produce.

This philosophy of change may, perhaps, be combated by the counter statement that the Negro ought to fade when living in a cooler climate. But if forces of life are awakened and made a distinct physical energy for the production of a dark pigment under the skin, does it follow that these forces must cease to act as soon as conditions are modified? The difference in climatic power between the tropics and cooler latitudes is in degree

only. The forces established may preserve the state induced, requiring much less energy than was necessary for their development. And yet the unlikeness in color may disappear as new conditions are in operation through a long period of time—say, some thousands of years.

This is a problem that cannot be solved by historical data, because such data cannot be procured. We can as yet only theorize, we cannot demonstrate.

We may now remark that all forces or developed conditions tend to fixedness or continuance. In our own being we perpetuate that which has been produced, especially if distinctly marked; and it is naturally transmitted to our progeny. Modifications come under the laws of life affecting all the processes of physical energy. A person born with club-hands is likely to transmit the deformity to his descendants, for a generation or two at least. Sporadic cases of the abnormal, being in a sense, perhaps, accidental—not growing out of inherited structural conditions — may be evanescent, but they indicate a modified tone, and may persist to some extent. Whether the influences which have the power of direction are external or internal, they organize great lines or types of the human race.

There are national traits which all observers recognize. To say that such a procedure is just like the French is not to speak in riddles. The

sociological characteristics of the French people, on the physical and mental side both, have a special distinctive form. "Polite as a Frenchman, impulsive as a Frenchman," is not a drawing on the fancy for a comparison, but is the recognition of a standard. To rule France is a problem quite unlike the swaying of the sceptre of government over the United States.

The German type is more staid and domestic, perhaps plodding, yet persistent. They are a people who can work a lifetime to get to the bottom of things. They make good investigators and do not weary in perfecting the arts.

The Americans are cosmopolitan; we are a mixture of all races, and hence the channels are not parallel, but flow into each other. Our traits are political, not physical or mental. We represent all lands and hence not distinctively any land.

The North American Indian is the man of the forest. His bow and arrow, or his gun, is his companion and means of support. He does not build cities, he does not create civilizations, he does not develop the resources of the soil. He cannot brook restraint. The thousands of years in which he has been the hunter in this western world have wrought in his soul a love of the chase and trained the body for the wild habits so difficult to overcome.

The Negro under the geographical restraints of

slavery has become eminently domestic. He has had a natural geographical habitat. Imported from the warm latitudes of Africa, he is at home in our Southern States. He does not take to the chase, he does not incline to overrun these lands of the North. Had not the horrors, or disabilities at least, of slavery driven him from the plantation where he had labored, he probably would rarely be seen in these northern latitudes. Physically and mentally he basks in the sunshine of the southland.

We know the Chinese wherever we see them. They belong to a period before the Middle Ages, before the beginning of the Christian era. Could they be set back thirty centuries in history they would be perfectly at home, for they stand to-day in the midst of the life and spirit of antiquity. Physically distinct from all other peoples, they mentally and morally belong to the ages of the long ago.

Something, it thus appears, has broken up the race into sub-races, and established physical and mental traits along national lines, so that to-day the world is far from being a unit. We started one, now we are many. But in the many-sidedness of the human we see the susceptibility of the man God has made, and the operation of laws which point to a future which we can as yet but imperfectly understand. And while that which is new is constantly developing, it persists as a

moulding power in the life of the individual and the race.

We will not here study this subject further, as it lies on the border line of the sociological.

CHAPTER XLIX

HEREDITY

The discussions of the preceding chapter naturally lead us to consider somewhat specifically the principles or facts of heredity, which is continually introducing new conditions into the midst of the permanency it conserves. It would seem that its purpose, primarily, was to perpetuate, not overthrow; to build up, not to tear down. But as everything which comes into our life becomes a part of it and exerts an influence over that which follows, heredity unceasingly promotes diversity conjointly with permanency. The duality of human parentage introduces complexity into the problem of being. That parents transmit to their children the traits of both father and mother, in varying degrees, all admit. Often we are able very clearly to trace physical characteristics, the features of one parent or the other, the complexion, the color of the eyes or hair, and the general physiological appearance, and also mental traits. In the

genesis of life there is traduction. God makes a human being through two other human beings and along the lines of their physical and mental life. And not uncommonly do we find what the parent was by the study of the child-life, even better than by observing the parent himself, who may hide that which is special in his nature. Sometimes the traits of each parent are weakened in the child; in other instances some of the traits of one or the other are intensified, under some law we do not understand. We mention these facts to show the complexity of the problem of heredity, and that there are depths we have not been able as yet to explore. But it is probable that nothing which belongs to the past completely drops out of the energies which have made the present and will make the future.

There are some very strange things under the law of heredity. That which was marked or noticeable in the ancestry of one individual may not appear again till after two or three generations. While usually the child of parents of whom one was white and the other black will have an intermediate color—mulattoes usually are several shades off from pure black—yet not unfrequently there will follow a generation or two of white children, then of black, or the reverse of this order. "To the third or fourth generation!" This would seem to show that there are no secrets that can be completely hidden; vice or wrong-doing may any

day come out into the light. God meant that the book of a human life should never be permanently closed.

This makes it a very solemn thing to live. The deeds do not end with the doer. We cannot live to self alone. We cannot escape responsibility to the Supreme Being for our acts, and we cannot arrest their going on into the generations which come after us. It is said that under physical laws a word spoken does not stop until the most remote star in the heavens is made to vibrate; and is it not true that we are to-day what all the ages of the past have made us to be?

We inherit both the strength and weakness of our ancestry. Many expressions indicate a conviction of the truth of this principle. They say to us, "Blood will tell." Such an individual, we are told, comes of a line of long-lived men and women, and hence we gather the meaning that in this case there is strong probability of an extended period of life. "The father and grandfather were brainy men, how could he be other than brainy?" Such a one, we are told, "had a remarkable mother; this solves the problem of his greatness." "The blood of the Scotch flows in his veins, he will stand by his convictions."

It may be true, as physicians tell us, that disease is not inherited. No child is born, it may be, with consumptive germs in his system; but many are born of consumptive parents with a minimum of

power to resist consumption. While disease may not be transmitted, it is sure to make its ravages. Statistics show that a tendency to vice is transmissible. Out from the brothels and haunts of wickedness comes forth human life, which, however thereafter it is carefully isolated from scenes of evil, manifests a penchant for gross immorality. To have a moral and noble ancestry is a boon of inexpressible value; to have a degraded ancestry is to have life rotten at the roots. People hesitate to adopt a child into the family without knowledge of its parentage.

How to check the flow of evil that passes along the channels of the ages, from generation to generation, we do not know. It is a mournful fact that much of human life at its appearance seems weighted for death. Individuals do not enter upon the journey of this earth under equally favorable conditions. Will Christian civilization find, and be able successfully to handle, forces which will largely neutralize the evils which assault life at its beginning? That the next generation shall be pure, we need to be pure. That those who follow may have physical health, we need to care for our bodies. That the passions shall not tyrannize over our descendants, we need in our own persons to repress such passions with an iron hand. That our children shall not be born unto the world ready to start down an inclined plane toward ruin, we must develop our own lives up to a state of firm

and steady resistance to every onslaught upon our manhood. We draw much of our life from our ancestry; and we shall live in our descendants. On us rests a fearful weight of responsibility for the world of to-morrow.

CHAPTER L

IMPAIRING THE ENERGIES OF LIFE

That from ignorance or thoughtlessness there should, at times, occur a depression of vital forces, a weakening of the tone of the body, need not, perhaps, excite surprise. Our attention has been called to the exceeding delicacy of the nervous system. It is made delicate, because of the delicacy of the offices it fills. There is no part of the body more commonly abused than this.

It is not strange that life is so brief. Rather is it strange that for so long a time it resists the destructive agencies which are made to act upon it. Should any machine be handled so recklessly, with such slight regard to the laws by which it is governed, it would not run a single day. The Creator has supplied reparative forces which are always in action to restore waste and maintain vital energy. There is a constant battle going on between destructive forces and constructive energies. Usu-

ally the latter are not worsted, if ordinary prudence and foresight are observed. But there is an alarming recklessness on the part of many people in the treatment of the body, showing an inappreciation of its functions and needs, or else an almost insane surrender to vicious influences.

The appetite which is provided for the building up of the body becomes, perhaps more than anything else, the means of its downfall. As all the operations of our physical and mental nature consume bodily structure, effecting waste, the complete destruction of being would soon follow, did not new material take the place of that which is removed. This material is supplied through the stomach, and is sought for and taken as a result of nervous craving which we call hunger. It is very evident that the consumption of food could not safely be left solely to the judgment. We might take too much or too little; take the food when the body did not need it, or omit it when the system required it. Hence the body is made to report its condition, calling for food when it would do good, and rejecting it when it would do harm. Not only are infants and young children dependent on the appetite for guidance—as are also the sick—but persons in mature life and in health. In this we are like the lower animal kingdom. Impulses have been implanted in the body for its healthy normal action.

The appetites are subject to modification in their

intensity and imperiousness, and somewhat in their direction, through the use to which they are put. That which is ordinarily mild and submissive may become a tyrant.

There is nothing which displays the abnormal and harmful action of appetite more than the use of alcoholic stimulants. No other page in human history, in any age, is as dark as this. The appetite for strong drink has wrought havoc in every land where these stimulants could be obtained. That the body has been at its mercy is a mild statement, when we consider the ravages made. Inebriety completely sets aside the functions of our physical nature, unfitting us for any of the purposes for which it was created. It lessens industry, arrests the arts, pauperizes the people, introduces disease into the system, making loathsome that which was intended to be pure and noble. A drunkard is physically an object of pity.

Mentally the havoc wrought is even more lamentable still. The effect of alcohol on the brain not only makes unsteady, even paralyzing the nerves, but renders the brain incapable of mental action. It is more than physical insensibility; there is mental incompetency as well. Reason vacates her throne, and the blindness of idiocy settles down upon the spirit. And when insensibility does not wholly prevail, usually the entire intellectual nature is maudlin, is without dignity and power. At the same time every impulse of right-

eousness, every sentiment of honor, all feeling of shame, and the sense of personal responsibility are parted with. The bond of friendship is sure to be broken, love is scattered to the winds, homes are demolished, and the fires of hell are kindled in the very heart of society. An immense majority of crimes comes from the use of strong drink and from temporary insanity which, in many cases, becomes permanent delirium, till at last Death steps in to claim his victim. The horrors of intemperance have never been fully written—they go down too deep into the life to be put on the page.

We need not stop to enlarge on this dark subject. We remind the reader, however, that there is a wide field closely related to the foregoing, but with somewhat modified action. Physicians tell us that morphine and other narcotics have created an appetite almost as baneful—perhaps equally so—as the appetite for strong drink. Not only does the body come completely under their control, but the moral sense is perverted, conscience loses her power, insincerity rules the life, truth ceases to be sacred, and the very foundations of right give way.

All admit that tobacco is hurtful to the young. The saliva of the mouth is intended to aid the digestion; and when from chewing tobacco it is expectorated, the stomach is defrauded of what nature supplies, and dyspepsia is likely to follow. The nicotine set free by combustion in smoking is more or less absorbed, and it is a rank poison.

The cigarette is a mixture of tobacco with other substances, usually to a considerable extent injurious. This, young persons seem to prefer, and there is no difference of opinion as to deleterious effects.

Though the nerves of adults have greater power of resistance and are less sensitive to harmful influences than those of the young, yet in the use of tobacco in any form there is a departure from the higher methods of physical action and life. The stimulation of the nerves should come through the processes of nutrition, not outside of these processes in the form of artificial excitement. That which is permanent must have its source in the constructive operations of the body itself. To deaden the nerves, as in the use of tobacco, is an interference with that which nature has provided, and creates an artificial life. God's plan is better than any departure along the line of personal indulgence.

All appetites need most rigid control. They serve valuable ends when they are not allowed to assume the mastery. They bring ruin and death when the reins of power are in their hands. There are inclinations which, unduly pampered, become passions ; and they may rage to the complete overthrow of reason, the entire debasement of the human. That which takes its rise in the body and can touch the mental life, should be most carefully watched. He that is wise keeps his body under.

CHAPTER LI

INTERACTION OF MIND AND BODY IN THE SPHERE OF MORALS

Is the problem of the moral life a problem of mind or body, or both? Profane language is an utterance of the lips, and is sometimes employed without any mental intent. But we call it immoral. A drink of alcoholic stimulants may be taken purely to steady the nerves with no purpose to produce mental results, and we raise the question of morals. The imagination sweeps out into the field of vice, and lovingly pictures vicious scenes, while neither hand nor foot is raised to enter into these scenes; yet an exposure of these thoughts would redden the face with shame. A plan is formed to commit a wrong against society, but fear of detection prevents the execution of the purpose. Is the person guilty or not guilty of immorality?

That is moral in which there is no guilt; that is immoral in which there is guilt, in which there is that which violates some law intended for the guidance of our lives. Morality embraces the purity and right action of the body, and the right purposes and right action of the soul.

That the moral does not wholly resolve itself into a physical fact is very plain. Is homicide wrong,

is it a crime? No, you say, when in fighting for your country you slay your enemy in battle; no, you say, when it is committed in defence of your own life; no, you say, when it was an accident you could not prevent. Yes, you say, when it was malicious; yes, when the purpose was to avenge some wrong; yes, when an accident in which due caution was not observed. Is it wrong to associate with the lower classes? Yes, when done by choice, from sympathy with their spirit, when the life commingles with their life. No, when it is not their companionship you seek to enjoy, but comes from a purpose to reform and lift up the fallen. A woman may be at the Five Points because she is base, or she may be there because she is pure and wishes to make others pure.

But in the moral character there is involved largely both body and mind. Each participates in the activities of the other. It is plain that an excessive use of stimulants debases the thoughts and corrupts the imagination. Should it be said that this is due to a deranged condition of the nervous system, which may be characterized as a disease; that the cause is physical and the effect is physical; it must yet be remembered that brain-cells take part in all movements of the life. The body reaches the mind through these cells, and the mind reacts on the body through the same medium. And we are considering results, not simply the philosophy of being. Every physical state tells on

character. Why does the Bible forbid profanity? Because thought and spirit are crystallized in the words, and through the words they sink into the soul. All forms of appetite and the passions, whatever they may be, have their lodgement in and spring from the body. They do not hide away, and work separately from the soul, but they stimulate thoughts and put wings on the imagination and mould the spirit. The vile words which fall on the outer ear go down into the depths of the inner life. The ribald song is much more than the breath of the lips—it is a power penetrating the very citadel of character, and becomes a part of the being.

Polished manners are morally wholesome. Correct outward demeanor is a restraint on immorality. Boorish ways create a boorish spirit. To look upon a slugging match is an education for vice. Nothing produces heartlessness more than the public execution of criminals. Familiarity with scenes of vice breeds vice. Vicious practices instil poison into the soul. Vice of every form debases the whole inner being. The passions have their roots in the physical organism, and their indulgence, while making their tyranny over the body more absolute, binds the chains of slavery more completely around the spirit.

Nothing is more wonderful than the response of the physical nature to the excitations of the mental. Not only in knowledge does thought find its

object largely in material things, but in the world of morals the inner is realized through the outer. Physical action is both the counterpart and the product of the conceptions and feelings. Anger takes hold upon the voice, causes the heart to beat with violence, and the blood to flow through the arteries and veins like a whirlwind of flame. Moral impurity is physical because it is first mental. Adultery is the longing look, the Saviour tells us. Out of the heart proceed, not only evil thoughts, but because evil thoughts are engendered there are "murders, adulteries, fornication and all uncleanness." The body is consumed with lust because the imagination runs wild. He who keeps his thoughts pure, will keep his body pure. To read a vile book is to plunge the body into a maelstrom of pollution; but the mental association with that which is pure and wholesome in literature is the keeping of poison out of our physical being, is the making of it a holy temple of a stainless soul.

The responsiveness of the soul and body in the domain of morals is a law of our nature, in which are consequences of the greatest moment. The soul can be corrupted by the body, and the body by the soul. An assault on the correct life of the body is an assault on the spirit.

Of what, then, does immorality consist? What and where is the sphere of the moral life? The moral quality of an act, we are told, inheres in the intention or motive—in the mental state prompt-

ing it—and yet the effect may be harmful though the purpose be good, or the result be beneficial though the intention be evil. The motive may have a mental origin, or take its rise from a physical state. Envy, jealousy, destructive ambitions spring into existence from purely mental conceptions, but they may lead to bodily acts in the highest degree reprehensible—to the slander of the tongue, or to physical harm maliciously inflicted. Out from the principles held, or the spirit within, there are sure to flow bodily activities which show the state of the heart, good or bad, and which are the living out in conduct of the moral forces at work in the soul. On the other hand, that which is outward, starting in correct deeds, or in the appetites, the passions, the physical habits, in the scenes and associations in society, finds its way into the soul to inspire ennobling sentiments on the one hand, or to corrupt the very fountain of character on the other. The bodily energies are turned into channels, right or wrong, by the mind; and the mind in turn is wrought upon by the physical activities, and made to be more or less pure or impure. The outer and the inner forces continually react on each other. For correct bodily activity there need to be rational and stainless mental conditions; and to keep the mind pure, the body must be kept pure. The soul and the body constitute a unit in the moral sphere which can never be dissevered.

PART THIRD

SOCIOLOGICAL

CHAPTER LII

COMMUNITY LIFE

MAN is an individual, but much more than an individual. He is a related, dependent, and co-operative individual. He is an integral constituent of a race unit. Any definition of a human being, or treatment of his powers and life, which does not connect him with the race, which does not include a race factor, is radically incomplete. In our being we are joined with others, with all others. Disregarding this fact, our nature is as imperfectly understood as would be that of a tooth in the hands of a chemist—from chemical analysis alone—not taking into account its place and office in the mouth, the plan of being of which it is a part, the purpose which it was intended and fitted to serve in the entire animal economy. A tooth is more than a piece of ivory, and a human being is more than an individual.

And the law of succession for continuance of the race does not embrace the whole problem. It is true that life must be traced back to Adam in an unbroken line, and that in him is found the root-germ of all nations and tribes, so that there is

blood relationship throughout the entire human family. But this is not all. In the completeness of our life, in what we receive and what we supply, the multitude about us must be considered. In no other way can we determine what we were intended to be. In the community of being of which we are a part we are different from what we otherwise would be, and much more than we otherwise could be, in an entirely separate physical and mental existence. We shall in a subsequent chapter invite your attention to the fact that in the great world of industry the millions are toiling for us. We shall see that because of the unlikeness of climate and diversities of tastes and talents, productions are placed within our reach, which, from personal effort alone, we could not create. For our physical good, the oceans in commerce unite, instead of separating, the continents ; and the arts bring us in touch with each other. Months have shrunk into weeks and days, and the thousands of miles have contracted to a narrow span in the interdealings of men.

The life that is given us has its purpose in the multitudes of people by which we are surrounded. He who does not contribute to the well-being of the human family, both loses his opportunity and neglects his duty. He can scarcely justify his right to a place on the earth. Only as he brings something of power rightly used ; only as he pours something of riches into the lap of society, is he

fulfilling a divine purpose. To live in one's self is scarcely to live at all; for self that does not disperse to others for their good, is but little more than a mathematical point, it has no breadth of being.

To become great and worthy, to reach a high plane of character, there must be community life. Isolation is death. The world is supplied as a sphere for the employment of our better powers, and that for our benefit. He who never pities, who never sympathizes, who is never philanthropic; who cherishes no friendships, who never stretches out his hand to relieve suffering, who never loves, whose whole being is self-centred, if not a nonentity, is surely destitute of every virtue. But how can there be sympathy, and friendship, and love, if the life be isolated from others? To give us, therefore, a sphere for the fullest and richest life, that we may grow up into that which is noblest and most heavenly, we are put in the midst of associations with other human beings. To absorb all is to shrivel our nature; we enlarge only by giving.

The field of our action, therefore, is the world, not the continental masses; not this terrestrial sphere simply for development, in large measure, or production of material things. Though business is involved, compelling labor—making industry a necessity—yet a demand is made on us in the higher realm of human forces. There is no ground for the supposition that heaven is a sphere

of inaction. To supply no employments it would be wholly unprogressive. In the absence of interdependence, with no occasion for mutual service, the heart would part with its most divine forces. God is love, and in His self-sacrificing love for the race, Christ takes hold of man and controls his destiny in the giving of Himself to us. There is but one way to grow and become mighty, and that is to care and work for others. Isolated individuality would rob us of the only possible sphere of development. And while the Supreme Being has intended that we should help our fellow-men, He has thus provided for the largest unfolding of our powers, the most complete fulness of humanity in us. Our being is linked with others. In a thousand ways, and all for our good, we are mutually dependent. Manhood is individuality organized into a universal community life; still preserving the individual, and perfecting it through relationship with the many.

CHAPTER LIII

MARRIAGE

"It is not good for man to be alone." Marriage is of divine appointment. It is a provision for successive and perpetual human life. But its purpose reaches much farther than this; it

looks to the enrichment of our being, the development of the purest and most elevating forces of the soul.

The greatest danger which man encounters is that of imperious selfishness. The strength of personality may be said to be in proportion to the might of the will; yet it ought not to follow that the end be selfish in order to have the power most effective. The executive energy of our nature is an inner power capable of being turned in many different directions. The use to which the will shall be put is not less important than the extent of the energy at command.

The greatest problem in the ordaining of human life is the harmonizing of will-action. There is decided liability of incessant conflict. This is sure to prevail if life is pure individualism. It can be prevented only by the creation of society in which there is coalescence through some bond of common interests. This begins in marriage. It contains the first and most fundamental social force in the community of the race. It starts in mutual affection, which includes a predisposition to render service, to will and act for the good of another. There is a potency of self-surrender in friendship. It is not difficult to perform acts of kindness to friends, and when the sentiment is deepened into love it carries with it an impulse to make other than self the object and plans of our good deeds.

Marriage was instituted as a provision for education in the most vital principles of our being. God desired to people this earth with intelligences who would co-operate with each other in achieving great things. To establish responsibility, from which there could be no escape, he made life individual as to powers; and in the fact of individualism there are incentives to action. Thus there were created innumerable centres of ambition in which the spirit of effort was sure to be stirred. But if the plan be not carried beyond individualism there will not only be lacking coalescence of effort and results, but there will be antagonisms culminating in destructive warrings. Agreement of human wills is an indispensable requisite to general society. Therefore at its very source the Creator invests life with influences to tone down its acerbities and supplant its selfishness with a holy and ennobling altruism by means of the deep love which leads to marriage, and abides through the years that follow. This is the initial force in God's sociological plan of government. Even if the race could be perpetuated without marriage, confusion would everywhere prevail, and we could not conceive it possible for civil government to exist. There would be anarchy, with no conserving or pacifying power.

Again we must remind the reader that life never becomes great without a conviction of personal duties. No human being rises to heights of gran-

deur to whom there has not come a clear consciousness and profound feeling of obligation to his fellow-men; and from marriage comes a scope of practical responsibility the most nearly universal of all the relations we sustain to each other. The bond between husband and wife involves a mutual surrender which entails duties which cannot be honorably or safely set aside. Each is intended to be the centre of the other's thought, the object of the other's care and life. To the extent that all of this is actually realized, there is developed the foundation of the best social condition of which we have any knowledge. The bachelor state is incomplete manhood or womanhood. In marriage responsibility and love act together to establish the best conditions of our nature, to enrich the human soul.

Marriage is the antecedent condition of the family. "God setteth the solitary in families." As dependent on the home, consisting of wife and children, there are special interests which must be cared for requiring regular and systematic activity. The physical wants of the home must be supplied. In this we have the ground, if indeed it be not the initial, of material industry. The great world of business has its inspiration not deeply in individual wants but in the love that is felt for the family, and the need for their financial support. Without this, every avenue of industry would be practically closed, at least the strongest inducement to labor

would cease to exist. Work is primarily a family problem. Inactivity is sure to prevail unless there be a motive for labor, and the most universal motive, and with most persons the strongest motive, is the support and comfort of the home. The labor of the hands, the employment of mental energy in the planning of industries, in the building up of the arts, in larger or smaller enterprises for the creation of capital, in the inventions made, spring principally from the divine relation found in the home circle. The world of industry, as a universal movement, would almost perish were the responsibilities and affections which spring from the fireside eliminated from the problem of life.

Human affections, like every other force in our nature, must have employment to become a positive quantity. That tender feelings may be aroused there must be relations to call them into existence. Love grows to its fulness in the mother's heart as the infant child lies in maternal arms, and the watch-care over the susceptible years of the new life is a constant and solicitous experience. There is a proverb "that blood is thicker than water." The father feels toward his offspring as he cannot toward any other. The home soil is the richest for the production of all that is kind and human in the soul. That the divine ideal of manhood and womanhood might come nearest to being realized, childhood is made the object, universally, of support, of training, of beneficence, coupled

with a feeling of loving responsibility to rear the young life for happiness and perfection of being. To be the father or mother of a family is to live in a school of personal culture, providing opportunities for self-training found nowhere else.

Marriage works out the following results. It stimulates and sustains industry, as we have said, through which needed capital is developed and morality conserved. It calls out and intensifies the affections, giving to humanity more of heart, and hence a purer life. It supplies companionship through which the demands of our social nature are met. In proportion to the purity and depth of love selfishness is restrained or displaced, and mutual beneficence developed and practised.

All of this is not realized in every home, and when it fails to be realized the fault is not in the institution of marriage but in the perversity of the human heart. Sometimes there is such a decided incompatibility in temperaments and mental tastes that divergence rather than coalescence follows the union which marriage establishes. In other cases there is hard-heartedness instead of tender emotions, cruelty which vents itself when affection should ensure the largest outpouring of kindness. While in the married state there should be the deepest love, there may be the torments of hell itself. Love turned to hate is tenfold more bitter than when it has started from a neutral plane.

So potent for good or evil is the marriage relation, it should be entered into only with the fullest knowledge of character and disposition by each of the parties; yet there is nothing else so heedlessly assumed as this. The passions do not count the cost, and love is blind. While it is base to marry without the emotional, reason should still keep her hand on the helm. Love should not usurp the place of sight, but should rather enforce the decrees the judgment has wisely issued. Be thoughtful in choosing a life companion is advice that should not be needed, yet it is too little regarded. Not cold and calculating but with feelings of deepest interest, do not close your eyes to facts of character, of disposition, or any personal traits. Marriage is not likely to correct evils. Accept no promise made previous to marriage of change of habits after marriage. He who adheres to vicious habits during courtship will not abandon them after courtship is over and marriage has been consummated.

Affection cannot be preserved between husband and wife when either is careless of the feelings of the other. This fact is too commonly disregarded. Happiness can be retained only as the spirit of courtship is retained after the marriage bond has been imposed. A woman is as much a person, with individual feelings, after marriage as before. Inattention, personal slights, the lack of courtesy, wound not less certainly than previous to the

union effected. He is an unworthy husband who treats his wife with less deference than other women whom he meets in social life. A harsh word, a depreciating word, the failure to show a recognition of kindly acts done, is full of poison. And the wife who is insensible to the struggles through which her husband passes in his business; who treats him coolly when he returns to his home at night; who saves her smiles for others, whether men or women, is sowing seed that will become thistles in her pathway in after years. There are many women who prize their husband's business efforts only as they afford means for personal adornment or indulgence. Such fruit is sure to turn to ashes. Mutual confidence, mutual appreciation, and mutual helpfulness will bring a perpetual harvest of joy; but neglect—selfish inattention—is certain to blight the harvest which should be a constant delight to the soul.

CHAPTER LIV

CHILDHOOD

Infancy is mental vacuity. Human life makes its appearance wholly destitute of intellectual content. And not only is there the absence of all knowledge, but also of the power of knowing.

Mind potentiality is a substantial foundation of powers and ideas, but at first there are neither ideas nor powers. Both must be wrought out to the actual from a fundamental provision made therefor. This we have already discussed.

The life of the infant looking toward the future is wholly in the hands of another. Alone, he perishes; to live or develop he must be cared for and guided by some life not his own. It is a problem in sociology.

The function of childhood is growth. In this it fulfils its mission. To be is not the end of existence; in its purpose there must be the realization of good through development of energies with which we are potentially endowed. To secure this the beginnings of life are committed to those who feel the greatest solicitude for the child's well-being.

It is the natural office of the parent to provide for all the wants of the child. That the physical needs are thus to be supplied, everybody knows. There is no civilization so low, no condition so debased, as to lose sight of this as a common duty. And that it be not neglected there is a parental instinct impelling to the discharge of this sacred trust. He is an unnatural parent who does not supply the child with shelter, food, clothing, and every physical comfort, that health and strength be secured.

But matured bodily powers are by no means the

totality of good. There are interests of greater moment than these. Nothing is so marked in child-life as the feebleness of its beginnings. Physically without the least power to help itself it is also destitute of even the slightest mental capability to provide for its wants. This is followed by what may seem to be an extraordinarily long period of mental and physical immaturity. Is this a calamity? Would we be better off if the feebleness of our early days were more rapidly overcome? In considering this question we must keep before us the fact that in the harmony of the body and mind the latter is the chief part of our being, and that the former is of special value only as used and guided by the latter. The problem of development, therefore, to which all else is subordinate, is the growth of the mental, and its training for the best and highest destiny.

The securing of this result depends on the wisdom which others can supply. Could the newborn being rush into business and take upon itself responsibilities with a period of preparation no longer than the horse requires to gain its full strength, life would certainly be a failure. Manhood means immeasurably more than the matured life of the animal. Bodily he is capable of filling a far higher sphere. To gain the skill in the various arts to which so many have attained, there is needed a long period of bodily plasticity, a plasticity which continues during the first score of

years, or more. This, for instance, is the most favorable time to practise penmanship, to acquire piano technique, to lay the foundation of manual skill in any of the fine arts, and for all delicate execution on the higher plane of industry. To shorten the time from birth to manhood to five, or even ten years, would physically restrict the powers we possess, would bring the race down to a much lower level than it is now capable of occupying. It is evidently true also that the brain is more responsive to mental impressions in youth than in after years. To defer the entering upon student life until in the twenties or thirties is not only a loss of time but the sacrifice of power. The child can learn to read more quickly than the man of fifty. We say to the boy, begin the study of Latin now, do not wait till you are a man. Under fifteen is a much more favorable time than after twenty-five. There is this brain plasticity in childhood and youth which subsequent years do not possess, for the making of nice distinctions; for gaining a knowledge of words; for rapidly extending one's vocabulary; for securing impressions which do not easily fade from the memory. Youth is the heyday of teaching for him who looks for the largest results in the training for intellectual manhood.

No one will dispute the proposition that the mental and moral powers of life are of supreme importance. To occupy an exalted position in

the world; to possess qualifications by which service may be rendered to society and the state so as to contribute to the triumph of right and the well-being of humanity, this is the most important of all. In creating the individual and subjecting him to the conditions which exist among men, making him a constituent of the race, God intended him to fit into society for his own, and society's good. With this end in view he has made childhood and youth an apprenticeship for the public, to gain a training for citizenship, to acquire a character that will contribute something to the harmony of the community and the stability of the state. Hence at the first the child is put under authority. The lesson of subjection is one of the first lessons to be learned. He is not at liberty to proceed as though free from allegiance to others. When he grows to be a man he will find that the country possesses statehood; that people are organized under governments; that government means power maintained by law, and that every citizen is subject to law which exacts obedience.

The first experience of the child is that of subjection to the complete control of another. The word of the mother, the command of the father, is absolute. For years there is no ground of controversy. For a time there is no explanation of the orders given. Submission must follow, even though it be a sore trial. After a time explanations may accompany the requirements, but with-

out a surrender of the right of control. The thing most needful for the child is that the will shall not be lawless, that it shall gain the habit of doing what is rightfully demanded. We speak of it as a habit of submission to legitimate and rational jurisdiction. This being established, it has become natural to be a law-abiding citizen. Unrestrained recklessness in childhood and youth makes criminals in after years. Juvenile offenders consist largely of those who have no homes, or, if homes, such as are vicious and lawless. The start crime-ward during impressionable years eventuates in confirmed law-breaking as time passes by.

There is nothing so fortunate for a child as to belong to a wise and loving home. We employ the word "loving," for no home is wise that is not loving. To crush the will of a child by cruelty may secure obedience, but in the overthrow of incipient manhood the groundwork of a noble life is destroyed. The divine plan is that control should be suffused with a loving interest in the subject under control. Hence parental supervision was ordained as provided for by marriage and resulting family life. The innumerable centres of family life throughout the country or the world, in which submission to law is taught and enforced, prepare the way for harmonious statehood as a feasible and permanent institution. Government thus is effective in the conservation and prevalence of needed authority.

CHILDHOOD

Childhood is the crucial period of life; though so largely dependent on others, in it destinies are determined. Nothing has been more truthfully said than that "the child is father of the man." And young life is what the parent makes it to be, or permits it to be. Native talents and temperament are inherited, but what shall come from these is largely determined by the associations, the spirit and movements of the home. The mother who for years commits the destiny of her child to a nurse, exercising no personal oversight, sins against both nature and Providence; she is derelict in the discharge of her first and greatest responsibilities. The father who is too busy to mingle with his family; too engrossed to fondle childhood and give attention to questions that arise in the minds of the youth of his household, neglects the highest privileges that can come to him, and fails to perform his most sacred duties. To accumulate money, to gain political distinction, to enjoy the associations of club-life, to pursue the leadings of ambition in any form, cannot be a sufficient reason for failing to come into the closest relations with the childhood of the home. And the mother who cares more for fashionable society than the companionship of her children, lives under the sway of perverted powers, and can never attain to the highest purpose of her being. God meant that in every way the parent should be a blessing to the child, and the child hence a com-

fort and blessing to the parent. The good may and should be reciprocal. Innate capabilities are brought out into results under the sociological influences which encompass the life of the child.

CHAPTER LV

SCHOOL-TRAINING

In all civilized lands we find organized provision for instruction of childhood and youth. Only to a very limited extent can training in scholarship be prosecuted as a part of family life. The time of the father is consumed in labor to provide means of support, and to the mother come the exacting cares of the household, leaving but little opportunity for systematic guidance in mental pursuits. And both in scholarship and in skill for imparting instruction there is nearly universal incompetence among parents for the work of supervising the studies of their children beyond that which is strictly elementary. For advanced scholarship, for progressive civilization, processes of education must be carried forward outside of the home, and by agencies which the home does not supply. So important is this, that the people regard it as a function of statehood to set in operation means for the education of the young.

In this country we have a state system which we call the public schools, containing, in many of the commonwealths, a mandatory requirement of attendance. We have a right to institute these schools and put the young in them because, without intelligence, a free and stable government is an impossibility. Not only is it cheaper to educate the people than to defend the public against the evils of general ignorance; but the state would be derelict did she not provide for intelligent citizenship so as to secure prosperity and perpetuity. It is not drawing on the imagination to say that the common schools are the corner-stone of our republic. Whatever else we give up these must not be surrendered for any reason whatever. In considering the social forces which operate on the individual, and through the individual shape the destiny of the nation, a large place must be given to public education.

But if it could be done, would it not be better to educate each child alone instead of massing the young in schools? This question may not be passed by without thoughtful consideration. It is true that different young persons because of unlikeness of tastes, of talents, and of temperament, need different treatment. School-methods are defective so far as all are handled in disregard of these primary diversities. The wise parent studies the peculiarities of his children and varies his methods of government accordingly. There is

danger that individual traits shall fail to be noted or given their full weight in our schools. The teacher who does not appreciate these personal elements, or does not seek to adapt his methods to special needs, should not be in the school-room. And it is not desirable that all child-life be reduced to the same dead level. To the extent—and we think there is this tendency—that the public-school procedure secures this uniform condition, it is productive of harm. One young person enters the school with a livelier imagination than another; some are able to grasp the abstract principles of mathematics far above the average of the pupils; while there are those who link their thoughts together in logical relations, with whom learning and thinking must be on the line of antecedence and sequence. He who fashions the human mind has made each for a special purpose, for which purpose he should be trained. At the close of school-days they should all come forth with intellectual peculiarities not less marked than at the beginning. Life should be built up according to the forces which nature supplies.

Conceding the foregoing, and emphasizing, indeed, the foregoing, it yet would be a calamity, for sociological reasons, to disband the schools and substitute individualism therefor. The observations of the writer correspond, we believe, with those of other teachers, that the work done in vacation, making up work alone, is seldom, if ever,

as broad and thorough as the actual class work. This is true even when pursuing somewhat advanced studies, after the student has had considerable class drill, and has reached a plane of high mental discipline. On a lower plane the work is sure to be very poorly done. The reasons are apparent. With a proper freedom of instruction in a class of a score of persons, many inquiries will be started by one and another, which would not arise to the mind of the individual alone. This broadens the subject under consideration, it leads to discussion, it widens the range of instruction, it therefore results in more complete scholarship. A comparison of views in the class corrects errors, secures accuracy, and leads to a fuller understanding of the theme engaging attention. Thus the knowledge of each comes to be nearly equal to the knowledge of the whole class.

In private study there is lacking, also, another important factor, the expressing in words the truths apprehended. The effort to formulate principles or state facts clarifies the mental vision, gives a consciousness of ignorance so far as it exists, intensifies the gaze, and hence supplies a more complete mastery over the subject. Scarcely less valuable than the instruction of the teacher is the recitation by the pupil when he persists till he has made a satisfactory presentation of the truth he is handling. We have seen marked defects in college in the mental workings of students who

made their preparation at home. Largely they showed a lack of power for free and accurate statement in connection with which there is more or less inaccuracy of knowledge. But after a student has passed through college and enjoyed the advantage of daily discussion; after he has laid the foundation for scholarship of a high grade by this rational method, he is supposed to have acquired a habit of exhaustive study as a preparation for individual research in the profession or vocation in which alone he must carve out his destiny. He should then be able to do personal work and use his acquisitions to the best advantage in the great battle of life as he measures arms with others.

Another fact that may be mentioned in this connection has considerable force. In the putting forth of effort we are influenced by the presence and observation of others. Paul appeals to this principle as a stimulating energy in the religious life when he says, "Seeing we are compassed about with so great a cloud of witnesses—let us run with patience the race that is set before us." There is inspiration coming from the gaze of others. Whether the love of approbation leads us or the dread of disapprobation drives us, we do our best when in the eye of the public. We prize the good opinion of others. Most students do not like to fail in the presence of the class. If this feeling does not secure study, nothing will.

The period of school-days is potent in determin-

ing character and deciding destinies. It is the time when youth moves on toward manhood, when foundations are laid for the future; when habits are gained which are likely to be perpetual. It is the seed-time which is sure to be followed by a harvest. Thorough mental cultivation brings a harvest both valuable and abundant. Wasted hours are followed by meagre results. In man-building this is the period around which gather our most important and vital interests. Trends are established along which we move to success or failure.

Two things are worthy of special mention. One is, that the interests of the public demand that much pains be taken to give to our schools, whether under control of the State, the Church, or of private parties, the highest grade of merit. Everything else, almost, should be made secondary to this. The young are a priceless heritage of life. It is not railroads, manufactories, and vast landed estates that make a nation, but the men and women. Civilization is a problem of brains and character, not of dollars and cents. Our supreme duty is to care for our children. The best of teachers—men and women of scholarship, irreproachable morals, and love for the young—should be employed, even though school-taxes must be increased. School-work is leadership more than didactic teaching. And with intellectual qualities of a high grade, and scholarship in which there is a mastery of the

branches taught, there is needed also a purity and nobility of life that the teacher may win the pupils into paths of virtue and noble living. It is asking much to require that the parent put his son or daughter under the daily supervision and influence of someone outside of the family, where impressions are sure to be made that will affect the character through all future time.

The other point to which attention should be called is the need of appreciation, on the part of the pupil, of the privileges enjoyed. The value of the benefits of study is not so easily discerned as of material rewards. At that age a hundred dollars seems larger than the benefits of a school-year. Knowledge is impalpable; the bearing of school-days on future good does not stand out so plainly to the sight as do farms, merchandise, and bank-stocks gained by labor. School-work, therefore, often seems a hardship, without definite reward, and the hours are frequently spent in listlessness, no achievements being made. Hence with wasted years manhood does not become a grand possession of power. Choosing the most intelligent and moral associations in the school, and bending the mind to the task of mastering the subjects of study, realizing how much the future must be the product of the present, the passing years will bring forth wonderful fruitage of good. School-training is a large factor in man-building.

CHAPTER LVI

EDUCATION BY CONTACT

It is not easy, if, indeed, it is ever possible, to trace the education of the life to all the sources from which it comes. The threads of influence are innumerable, and they are so intertwined that they cannot be unravelled. The schools have not a monopoly of educational work. They are a special agency for the promotion of what we technically call scholarship; but outside of them, as well as within them, there are trains of influences which specially affect the mental life and direct its powers. Society, using the word as standing for human beings in direct and practical relations with each other, is itself a universal school of which organized provision for teaching the young is but a small part. There are a thousand ways of gaining information, a thousand subjects enlisting attention, and the kinds of mental and moral products resulting therefrom are without number.

We live in communities. These communities consist of individuals of every grade of intelligence, of unlike personal habits, of opposite or divergent views relating to business, to politics, to religion, concerning both time and eternity. The forms of

industry are diverse, the ambitions and amusements lead in different directions; life is as motley as Joseph's coat of many colors. There are noble men and women; there are those who are base, foul of mouth, and sunken in iniquity. Some industries are legitimate, and then there are industries fitted to corrupt all the fountains of being. There is the realm of virtue, and there is the foul breath of the pit. To walk upon the street is to come in contact with life or death. Political parties spring into existence; the nation is stirred from centre to circumference with appeals that are patriotic, or, perhaps, born of greed or lust of power. The church points toward heaven, and the saloon seeks to drag down into hell. No spot can be found where virtue holds undisputed sway, and we are glad to know that there is no place so vile but that right and truth there lift up their voice of warning and hope. How to shun the evil and gather in the good is a question not always easy to answer. In coming into such a world as this the child plunges into the midst of dangers innumerable; but yet there are paths which lead into realms of safety, and where flowers of virtue perpetually bloom.

"No one can touch pitch without being defiled." To come into contact with that which is evil is to feel its power. Picturing vice in order to show its deformity does not drive toward virtue, but rather whets the appetite for the unwholesome

food. The drunkard's reeling on the street does not reform the onlooker, but tends to debase the moral sense of the community. Vice does not react for the exaltation of virtue. You can convert sugar into vinegar but you cannot convert vinegar into sugar. Virtue may make a misstep and become vice, but vice never makes a misstep so as to become virtue. Familiarity with vice breeds evil and evil only. The terrible associations in the world of the lost will not work a change for the better. Strange as it may seem, the abhorrent qualities of the wicked do not repel, but stir into action an attractive force, or instil poison into the soul.

The public-school system of a people and its civilization are not synonymous terms. The actual life of a nation is much more than the instruction given to the youth in the school-room. It is not the teaching of arithmetic, grammar, algebra, Latin, history, or even civil government, that makes the character of the people—making it noble or ignoble, settling the question of freedom and the type of personal and community life. School-work enters into civilization, but it is by no means the whole of it. The branches taught in our American schools would not make Americans of the Spaniards. They are what they are because of the experience of the past, their theological creeds, their national aims, the wars they have fought, the forms of industry prosecuted, and their relations

to other nations on the great battle-field of history. Even their jurisprudence does not come from their schools but from their hot-headed temperament acted upon by, and acting through, their special environment.

Something more would be needed than our school-system to give to the aborigines of this country our American spirit. In part our civilization has been imported, in part it is the outgrowth of our industrial and moral life. Not only do the traditions and inherited spirit of the Indian make him what he now is, but everything upon which he gazes, the unrestrained freedom of the forest, his conception of the degradation of labor, his notion of the inferiority of woman—all that enters into the workings of his mental being, with his notions of honor and his conceptions of right. With him liberty is not the absence of restraint upon duty and justice, but it is freedom from responsibility to others. He conceives the individual to be most nearly free whose will is uncurbed.

It is evident that that which is outside of the school-room may bear on human destiny not less vitally than the instructions imparted therein. Saloons lining the streets, though not entered by the growing boy, tell him a tale which makes him familiar with vice. The profane word which he hears, though not at first spoken by his own lips, dispels the feeling of the wickedness of impiety. The ribald song which falls on his ears opens to

the imagination the avenues of vice. The father, the older brother, the business man, puffing a cigar is an allurement toward this baneful habit. Fashion has entrapped many a young woman and dispelled all thought of duty and a useful life.

On the other hand the temple of Christian worship calls to mind the Supreme Ruler of all things, making its appeals, though mute, in behalf of a life of submission to divine law, and of reverence for that Infinite Majesty in Whom is perfection of power, of wisdom, of justice, and of love. That community is outwardly best ordered that removes from sight, hearing, and taste everything which suggests vicious thoughts, which inflames and taints the imagination, or opens the way for the formation of degrading habits. It is sad that childhood and youth should be assailed on every hand by scenes which poison the mind and draw into paths that lead to ruin. And yet there is reason for much rejoicing that the public conscience is becoming awakened to a realization of responsibility to purify the fountains of government, to banish that which is vicious from our streets, and surround our homes with what has less of peril for the young.

But there is a false philosophy which lessens the care that should be exercised. It is assumed that not only is youth the time, in its exuberance, in which much of that which strict principles of morality cannot endorse, is often practised, but

that this will naturally end when manhood is reached. "Oh, he is sowing his wild oats just now, he will come out all right!" Was there ever a more dangerous delusion? "The appetite for strong drink fade away?" "Corrupting habits become virtues?" This is the voice of folly and allures along the way that leads to ruin. Nothing retains its vitality more than the seeds of an evil life. A certain harvest? Yes, and a perpetually renewed harvest; to the end manhood carries the curses which youth has implanted in both body and soul.

The beginnings of evil make their appearance in youth and generally become more rank as the years multiply. Should they be repressed, under a conviction of their folly, they still cling to the life, rankling within. The home that is pure saves from a thousand snares; but a corrupt home is just at the entrance to the chamber of death. A community from which the pitfalls of vice are banished throws a safeguard around the young, while the places where corrupting influences abound are filling moral graveyards with the lost.

Wisdom lifts up her voice and cries out to every young person: "Shun the paths which lead away from virtue. Go not along with evil-doers. Scorn depraved companionship. Drink not at corrupt fountains. Sow not the seed of folly and vice, for the harvest is certain." The learning of the schools will be powerless to ennoble the life when the steps take hold on death.

CHAPTER LVII

THE PRINTED PAGE

It was evidently the divine purpose to make this earth socially a unit, so that the pulse of each land should beat for all lands, the good anywhere developed becoming the common heritage of mankind. Isolation is repression; prison walls, whether made of stone or consisting of mental restrictions because of the absence of lines of communication, break society into fragments and arrest progress. We need to draw our mental supplies from every quarter of the globe and from every period of time. The blow we strike should be felt in every country; and the reverberations from the struggles and hopes, the successes, the triumphs and even the failures, on all the continents and islands where man dwells, should make their impressions on our hearts and lives.

The contact of one life with another is sure to modify the character. That boy is fortunate who has a wise and upright father; and a vicious parent, with almost absolute certainty drags his son downward into evil. Intimate companionship tends to unity in thought, feeling, and purpose. In many respects there is sure to be a mental family likeness in the home, not simply from inheri-

tance of traits, but from the constant interchange of thought and sentiment. In politics the son is most likely to see things as his father sees them. And the type of family life when the home is isolated from all other homes, is built up from within, is wrought out by these limited associations, and is, it may be, in marked contrast with the spirit prevailing outside of the family circle; but as neighborhood life is introduced, and more and more widely prevails, local unlikeness disappears, each individual and family contributes to, and receives from the others, through the extension of sociological forces brought into operation. More widely still do these modifying influences extend as the neighborhood expands to the state and the state to the continent and on to the vast world of being.

No one in studying sociological forces could fail to find a large place for the printed page. It is evident that the art of printing has completely revolutionized society. This, history shows. The world with the printing press is wholly different from the world without it. Eliminate from the life of to-day our reading matter and there would be taken out of experience, in full or in part, almost everything which characterizes our civilization, which shapes the policy of government, which arms the church with power, which guides the industries of the continents, and gives to each one of us a world-citizenship. Whether for good

or evil we are in touch with each other through the press. Heart speaks to heart and thoughts become cosmopolitan. That is most broadly sociological which puts people most widely into communication, which most completely in thought abolishes latitude and longitude, and brings all the ages into communion. This the press accomplishes for us. It gives to the past a voice for our instruction and guidance. It preserves both the good and the bad of successive ages. It weaves the mental work of all lands and periods of time into the warp of human life so that it shall not perish. And in the working out of world-problems through the press every country is taking part in the movements which tear down and build up and which are making history. London is to-day talking with New York; Berlin and Vienna hold converse with each other; Paris and St. Petersburg exchange views; America and the Old World discuss great questions of finance, of tariff, of different forms of industry and the policy of governments. Congress, the British Parliament, the French assembly, the German Bundesrath, and the Russian Czar cannot rule in secret. Governments and the people of all lands hear the heart-beats which thunder along the columns of the printed page; restraint is put upon power, and world-politics are shaped through the influences thus exerted.

The monarchies of Europe would have been much less disturbed by the establishing of our re-

publican form of government could the printing-press have been silenced. Despotism fears the printed sheet more than everything else. The censorship of the press in despotic lands throttles free speech, almost completely withholding intelligence. Before our Civil War every effort was made to shut out from the South the broad discussions of human liberty, even preventing the teaching of the colored man to read lest he break his chains. Civil rights can be fully guaranteed and maintained only by the largest freedom of the press, with no restraints other than moral restraints.

But the press should not be lawless any more than any other agency of power. Nothing can do more harm. Its evil effects are more permanent and destructive than the utterances of the lips. A libel—a printed slander—is rightly punished with more severity than damaging speech. There is no more important problem than the proper handling of the press. So great, so pervasive is its power; so largely are the destinies of individuals and nations in its hands, that we may well look upon it with interest and, perhaps, with alarm. We are accustomed to say that illiteracy, in its exclusion of intelligence, is, when it exists, a menace to the state as well as an individual disability. That it can largely prevail in this country is scarcely possible. This is a reading age. The child that does not learn to read must be isolated from the influences which almost universally work for intelli-

gence. And having learned to read, the inducements to use this power are almost irresistible. But, unfortunately, much of that which is enticing is baneful. The very citadel of the moral life of the child is in many cases attacked, captured, defiled, and ruined. The people are awakening somewhat to the terrible evils which are preying on society; but how to arrest them is not easy to determine. There are books published which should never come from the press. There are papers printed which ought not to see the light. Efforts are made to guard the mails from this evil, but only with limited results. Something further and different needs to be done. We speak of this here from its relation to the subject discussed in this chapter—the education through the press, the wide-spread sociological power of the press over human life. Solomon said, "Train up a child in the way he should go and when he is old he will not depart from it." This is the statement of a principle which we may regard as universal. But there are, practically, difficulties in the way of perfect training because of the press—as well as many other perverted agencies of power—of which Solomon had no knowledge. We cannot keep the child beyond the reach of public influences, and vile literature has permeated almost every avenue in which human life is found.

On the other hand, the press is a mighty power used in behalf of good, and as such becomes a de-

cided factor in the building up of manhood. To the extent that truth and pure and noble sentiments gleam forth from the printed page, they enter into progress and make history that is worthy of being immortal. The Church speaks through the press, sending messages of warning, of mercy, and salvation to the millions that would otherwise perish. The Bible, scattered all over the earth, tells of God, of immortality, of heaven for the righteous, of hell awaiting the incorrigible sinner, of Christ dying that we might live. And it is the Sword of the Spirit through which the All-Father finds access to the hearts of men. The religious press in its various fields of operation visits the Sunday-school, the fireside, the home of the toiler, and the study of the sage; the desk of the statesman to awaken spiritual impulses; the office of the politician that he may understand that God is greater than man; it goes to the seeker after wealth that the voice of conscience may be led to give forth its warnings; to the student that in his learning he may realize that back of the universe is the Eternal, the First Cause, and that over all men there is a throne of power and infinite sovereignty.

Whatever be the field in which men are at work, they depend on the press to carry forward their projects. Science thereby records her discoveries; industrial pursuits find in this a treasury of knowledge and a guide to success. Without it the schools would languish and die. Political parties

do their largest work through the printed page, putting their appeals before the eye of every voter from one end of the land to the other. Every interest of the race wields the press as an arm of power. We can scarcely conceive what we would be had the printing-press never come into being. All forms of power depend upon it, and every life is moulded through its agency.

A word of advice is here in place. Read—not all that is printed—but the best. What is the "best"? That depends on the end to be reached. There is a moral "best," an intellectual "best," an industrial "best," a "best" for information, a "best" for training the imagination, a "best" for scientific pursuits. Read wisely, with an end in view. Read nothing that will mar the life. Read that which will promote intelligence, which will train the powers of thought, which will exalt the character, which will make you more philanthropic, which will make you a better citizen, which will enable you to get the most out of this life and will interest you in the life which is to come.

CHAPTER LVIII

INFLUENCES OF TRAVEL

NOTHING characterizes the present age more than the restlessness which seeks in travel something not possessed at home. This restlessness is not always an impulse to flee from existing experiences because of their lack of power to afford satisfaction; it may even grow out of a keen enjoyment of that which makes up life. The student does not eagerly push into new fields of thought because he is tired of the old, but from a sharp appetite for truth. But whatever may be the inspiring motive, man is ever on the move, traversing new fields and entering into new experiences. The monotony of life, at least, is dispelled; fresh scenes are successively encountered, and new impressions daily gained. The world is outwardly enlarged, though not, perhaps, always intensively deepened. Views are multiplied, possibly at the expense of the depth of conviction of, or insight into, the content of that which is more limited in scope. At any rate in the case of the observant traveller the stock of information is increased. With some persons this may be at the expense of the action of the reflective powers—facts taking the lead of philosophy, knowledge rather than thought—but a groundwork for

thought is laid; in enlarged views there is a broader foundation for a grand temple of truth, for a structure into which universal knowledge may be incorporated.

There are diverse forces in operation bringing about diverse results. Climatic conditions, for instance, are exceedingly varied. Nature in the tropics is radically different from nature in the frigid zones. One abounds in vegetation, the other is almost destitute of it. In the former, man need not labor, the earth is lavish of her gifts. Indolence hence prevails, and mental apathy takes possession of the life; in the low civilization prevailing there is the absence of great principles stirring the mind, and government is rude and limited in its provisions.

Physical, and hence mental, conditions rapidly change as we trace either way from the equator toward the poles. Thus not only does climate supply tendencies which are wrought into life and make history, but unnumbered diversities in physical configuration enter into the problem. We have a world made of land and water, broken up into myriads of divisions of every conceivable form—continental masses, with mountain ranges, plains and valleys, rivers traversing these great divisions of land, and vast oceans covering a large part of the earth's surface. From these unlike conditions a historical variety, which is radically diverse in arts, industries, and civilization, has sprung into

existence. We find there are cities for defence amid mountain fastnesses; commercial cities by means of which the products of a continent make their way to the sea. Rivers not only carry the water from the heart of vast continental masses to the great oceans which belt them, but they are the highways of trade. Coast indentations become seats of empire. Governments grow up around industrial centres; political ambitions take shape according to nature's prophetic utterances; problems of thought arising from local needs or advantages arrest the attention; and we have a world as checkered as the leaves of the forest in the autumn sun. But each centre of civilization has local features—partial, not universal.

The press tells us of these varied points of interest, drawing the contrast as far as types can paint the picture. But it can only give us the skeleton, it cannot cover it with flesh; it cannot put the tint on the cheeks; it cannot bring personalities in touch with each other; it cannot unfold the tone of the voice and make the inner life real. No one can to-day feel the heart-beats of the races as they lived two or three thousand years ago. To read one of Demosthenes's orations is much less than to stand in the great assembly in elbow-touch with the people, impressed by the important interests which called them together; listening to the words of the matchless orator, seeing the emotions gleaming in the eye and moving his features, yourself

dwelling in the scene, yourself a part of it. The past, however accurately described, will not come back to us—only in shadows. What we read about men and things, though valuable, is incomplete. We know the community about us only as we come in contact with the people, hear the voice as it speaks, feel the touch of the hand in the greetings offered, engage in conversation, realize what the problems are which stir the minds of business men, of educators, or religionists, both rich and poor; see the people in their homes of gladness and of sorrow; come in contact with their daily movements; gaze upon the work they have wrought, and witness the trend of community and national life.

The mind grows by what it feeds upon, and in the absence of food growth is arrested. It was evidently God's purpose to lead forth our powers through that which is external to our being. From our earliest years the horizon of life is constantly enlarging. It is first, the narrow circle of home, then the neighborhood, then the state, the country, and the whole world. In this process all the senses are employed. It is an extension of the primary methods of knowledge into wide fields, carrying forward on a large scale that which has been so successfully begun in early years. Much is obtained in this way that cannot otherwise be secured. Realities are perceived in their actual settings. Impressions are gained which go down

most deeply into the mind and abide as a possession of the soul. An inspiration for knowledge is awakened which can in no other way be stirred within us.

To illustrate: No one can obtain from the descriptions of the press such a view of Paris as enters into the being by spending a year or more on its streets, in its assemblies, looking at its architecture, visiting its museums, talking with its people, feeling the pulse of its social life, observing its customs, sitting at its firesides, giving attention to the political problems which arise from its history, and scanning the religious trend of the city growing out of the crystallizations of the past into the life of the present. He who would understand Jewish history knows he must visit Palestine, walk the streets of Jerusalem where David and Solomon held their court, where that strange civilization of exclusiveness grew into a spirit that has defied the allurements and power of nineteen centuries of time. A Chinaman is fully a Chinaman only as he is in the midst of the traditional life of his own native land, and swayed by the power of his ancestral religion; where every foot of soil is as sacred as the memory of his fathers who have entered into the realm of the gods. The earth conceived as 25,000 miles in circumference, comprising land and water, with human beings born into the world and spending here a brief period of time under different forms of government, means to us much

less than when this earth is traversed for inspection, when its mountains are climbed, its rivers are traced, its varied home-life witnessed, its intellectual status measured, its political systems fathomed. Philosophy read is one thing, but of far more interest and significance when encountered in the concrete personality of the living philosopher himself who is possessed of its doctrines and spirit. To hear Socrates talk would be to us inexpressibly more than simply to read the utterances of his lips. One cannot read of the land of the midnight sun so carefully as to convince him that he has it all, that nothing further would await him should he traverse its weird domain. A museum gathered from all quarters of the globe, representing its minerals, its animal and vegetable treasures, has its value, but is much like a hand severed from the arm, a foot amputated from the leg. Nature must be seen in her habitat to be most instructive. God did not plan to save the world with the Bible alone, but with the Bible in the hands of the living messenger of salvation making his appeals to the understanding and hearts of the people.

We cannot easily estimate the extent of the sociological forces on the life when permitted to exercise their sway over us. They come from every quarter of the globe and weave themselves into our being. We cannot get beyond theirreach. To escape them we must live in seclusion as the

hermit lives, give up locomotion, and anchor in the soil like the plant that dwells alone.

Sociological influences, with their moulding power, are rapidly multiplying. All lands are being merged into a community of life. Africa, the "sealed continent," breaks its seal and all men gaze into its hitherto dark recesses. Steam makes the Atlantic and Pacific highways of trade, of travel, and of thought. Electricity is not only the mouthpiece of intelligence, but the propelling power of commerce and the unifier of states. Railroads traverse all plains, wind around the mountains, and penetrate into hitherto unknown lands, carrying the explorer and the man of business, introducing the civilization of far-off countries. Siberia will cease to be a dreaded penal colony, for the scream of the locomotive awakens echoes among the hills and mountains, and the hitherto isolated domain is beginning to shake hands with the empires of Southern Europe. Even China will lay down her weapons of defence against the free commerce of thought. Her ancestral religion cannot shut out the railroad. No wall is high enough to successfully repel the instinct of intercommunication of the peoples of the earth. With the increasing commingling of races, national and individual differences disappear, and all approach a common status of life. Asia will be Europeanized, America will more and more send back to the Old World her ideas wrought out on this Western Continent.

All lands will come into a congress of thought, and each human being will be a composite of unified but hitherto discordant forces of history and civilization.

CHAPTER LIX

COMMERCE AND INDUSTRIES

Commerce, scarcely less than production, is a necessity of life. The forms of industry are almost innumerable. No individual could handle them all. For this diversity of operations there are both mental adaptations and physical laws. The rotundity of the earth, causing variety in climate; the distribution of land and water; the diversity of natural resources and their special localization compel unlikeness in occupation. The digging of gold is confined to the gold-bearing rocks; the mining of copper can be carried forward only where there are copper deposits. Salt wells are operated where there are saline strata, and petroleum is found in limited sections of the country. Wheat lands are not always good grazing lands, and the cotton prefers a southern climate. The endless diversities of nature's products grow out of special physical adaptations which are restricted in their extent.

There is a diversity of tastes and talents which

leads to unlike employments. For some, agriculture has special attractions, while others are more at home in mechanical pursuits. One man chooses the platform, another the bar, and another the pulpit. Some delight in the painter's art, some in handling the sculptor's chisel, and others find their way to the sick-room to administer relief to suffering humanity. The successful artisan might make an indifferent farmer; and the able lawyer a poor mechanic. The poet is not always a financier, and the prosperous merchant might fail as a stock-raiser.

The result of unlikeness of tastes and talents, and of localized natural resources, is a multiplicity of industries, each pursued by a limited number of individuals, and all interdependent for profitable consumption of products. The theory is without foundation that society is the result of an artificial compact; that the people have consented to a life of neighborliness because they have found it to be profitable. There is a social instinct as deep as life itself—a factor of life. Society is a fundamental race reality not less actual, as we have pointed out, than the existence of individuals. But in harmony with this instinct—not a substitute for it—there is a business dependence which serves to bind, more strongly, the people together. They cannot live apart if they would. Personal animosities might work with terrible force to separate one from the other, but this alienation can-

not be complete, for each creates something the other needs. To live in absolute isolation is to drop to the lowest plane of enjoyment, and live a life that is wholly unprogressive.

Thus the race is a great trading community. Each person produces one thing, or a few things, and consumes many things. All forms of business are linked together in a community of interests which has never been dissolved. On the lowest plane the laborer is a necessity to the capitalist, and there must be capital in order that labor may find employment. And getting above this plane, away from the relation of employer and employee, should it be held that each is an independent producer, yet it is apparent that no one is an independent consumer. He may manufacture one thing, but for bodily and mental wants he must have many things; and, indeed, the material he uses and the machinery he handles, if at all skilfully made, must be the product of other industries. The problem of rights in industry, and of improving the condition of the laboring man, is not a problem of greater or less dependence, but of special relations within the state of mutual dependence. Many persons interested in social and practical economics are looking for great changes for the better through the introduction and action of co-operative industry, in which a share in the profits shall be substituted for wages now paid the laborer. This dream may be realized, but inter-

dependence will not be lessened, it will be a change of mode within a sphere of mutual dependence. By co-operative industry there will be the removal of the friction between labor and capital if co-operation shall be equitably arranged. This would destroy the ground of strikes, and be a great pacifier in the industrial world. How fully it could be introduced cannot be positively stated, but in any event the links binding us together must remain, each must contribute to the well-being of all.

Even combinations that are called trusts—which are capable of doing much harm—do not dispense with the community principle. They are monopolies that can override smaller aggregations of capital, and crush out competition unless restrained by wise legislation. The evil is not in the large amount of capital invested but in the irresponsibility, in its handling, to the individual citizen. Now by increasing the facilities for production by labor-saving inventions, for instance, capital is increased. Any arrangement, indeed, which permits a reduction of the pay-roll increases profits. Society is to be congratulated that labor, because of better machinery, more complete specialization and improvements in transportation, is becoming more profitable. The only thing to be feared in these vast industrial movements is that the modes of procedure shall transgress natural rights, that many will not receive due share of the profits

which directly or indirectly they have helped to create. All progress is liable to work some form of temporary hardship.

These thoughts bring us back to the consideration of the fact that the world is a great trading community. Specializing in production we must certainly exchange one with the other, and increasingly we will exchange with all lands. Without it production must wane and indolence take possession of our powers. Certainly it is true that thus there could be no high grade of civilization, no grand sweep of progress. The force of this last statement will be appreciated when we stop to consider that the industries of the people are a great school. More thought has been bestowed on them than on anything else, than perhaps on all things else. To obtain a livelihood appeals to most persons as of the first importance. Commerce, which, on a larger or smaller scale, is a medium for possession, is an exchange of personal efforts. Mental energies employed in production and interchange is the great factor of industry. Each person in this mighty army of toilers is trafficking in thoughts, under plans formed and schemes devised, with some intelligent purpose in which life itself is at stake. It is mind coming in contact with mind. Experience is gained, intellect is sharpened, broad views are gained, and we become what we are through this intermingling of thought, this interchange of ob-

jects of desire. Life is wrought out in its development by constant activity in the industries prosecuted. That which is about us in nature, and our various talents and inclinations, determine the direction of our energies, and the future brings forth fruit from the special seed thus sown.

We must not fail to state more explicitly that one of the most vital facts in sociology is that business interdependence is not only a stimulating but a conserving and binding force, establishing a unity of life which nothing can permanently dissolve. Even when absorbing selfishness rules in the breast we must help others, for thus only can we help ourselves. He who pauperizes his neighbor pauperizes his own being. To own everything is to own nothing. Sharing with others is, even on rigid business principles, increasing personal gains. It requires more hands than our own to supply our wants. Into the sum of our possessions enters the labor, the creating energy, of the multitudes of those who are toiling for their own good. Social instinct might, perhaps, be overriden by personal malice, but completely to sever business relations would be certain ruin.

Thus in the education of an individual the world about him does and must participate. He does not, he cannot live purely from within. Innumerable waves of influence and power beat in upon him from without. He may select, but he cannot bid defiance to them. Some employment he must

have in relation with the world around him. If conscientious, he will not choose that which demoralizes and works ruin. If wise, he will select that which will be most abundant in fruit for himself and his neighbor. If generous, he will not seek to live for personal ends only; and he who robs the community will, in some way, lose more than he gains.

CHAPTER LX

THE CITY AND THE COUNTRY

Man works out his destiny on the earth; this must be his place of habitation. It cannot be a matter of indifference as to the specific theatre of his life, the problems he shall encounter, the scenes through which he shall pass. There are two radically opposite conditions, the dwelling alone with nature, and the dwelling in the midst of thronging multitudes of human beings. We speak of the country and the city. No one can profitably study the life of man in its development, the outcome of his activities as an individual and in national and race manifestations without taking into account the environment within which he spends his days. In the city the human is at its maximum and nature at its minimum; in the country nature is at its maximum and the human

at its minimum. On this contrast depend the unlike results which appear and enter into life. In this discussion we are concerned only with the modifying influence of the theatre of our activities, the bent which is thereby given to our education.

The object on which thought is employed and the character and extent of the stimulus applied are the determining factors in the modification effected in our being. Gazing with interest on the immoral, making it a constant object of attention, debases the soul. Scenes which are pure and lovely develop within us a state free from that which is impure. That which tells of the accumulation of wealth, suggesting at every turn the making of money, increases, so far as it takes possession of us, the greed of gain. To dwell amid lofty mountains; to spend our years in the presence of scenery that is grand, manifesting majesty and power, is a training of the imagination, an exalting of thought. The vast expanse of the ocean, the limitless sweep of the prairie, broadens our mental vision; while with life shut up within some contracted area, never looking out beyond it, the conceptions of the mind are narrowed, the import of language is reduced to its smallest content, and everything is shrivelled. To look upon sorrow is to have sympathy inspired; to dwell only in sunshine banishes sadness from the heart. Adversity and prosperity work out opposite conditions in both our mental and moral being.

CITY AND COUNTRY

The city and the country do not differ so much on the quantitative as on the qualitative side. Nature, though full of life, has a restful life. Except in movements such as we find in the foaming rapids, the plunging cataract, the furious ocean, the maddened stream — which manifestations of power are not common—there is no rush or hurry. In the budding spring, the growing summer, the ripening autumn, there is no dash. The pulse of nature beats silently, it never races at fever heat. There is no cornering of the market, no combination to excite alarm. Everything is frank and open to view. There is a fulness in nature, but it is unlike the fulness of the city. The student sees in the soil, in the growing plant, enough to tax all his powers of research. The botanist finds in the vegetable kingdom a wonderful laboratory where the inanimate is transformed into the animate; where the stateliness of the forest, the beauty of the flower, the nutrition of the fruit, the germ of the seed for the resurrection of life as the seasons make their rounds, impress us through the action of their astonishing forces. The zoologist in the animal world is in the presence of vast energies on a plane much above the vegetable, where the organic puts on powers of locomotion, is possessed of instinct and discriminative intelligence, and renders service to man in unnumbered ways.

The primary sources of knowledge are not large-

ly in the city, but in the country. The soil with its chemical forces; the sunlight and rain acting on these constituents to develop the plant; the mountains condensing the moisture into rain-clouds to feed the river systems; the mines of silver, of gold, of copper, and of iron adapted to the uses of man; the deposits of coal for the arts; the plant and the animal world which supply problems without number for our solution, these, with multitudes of other fields of study, are soliciting our attention. The farmer can and should be a scientist. Producing that which feeds the body, the mind may be enriched day by day. He may commune with nature, he may ask nature a multitude of questions which she will answer, provided he intelligently listens. Away from the bustle and distraction of the great gatherings of men, he may come close to the heart of God's own world, and hear divine voices which would be drowned by the noisy confusion of the city. As that which characterizes the city is bustle and strife, we have in the country nature in her largest fulness; themes of thought which are suggested by the special forms of industry there pursued, and the deep things which God has hidden—or revealed?—in his works. Sociologically, then, the country exerts the smallest influence over us in shaping our lives, but it supplies other forces which affect our destiny.

As in the country we are face to face with nat-

ure, in the city we are face to face with men. In this respect the contrast is almost world-wide. Human beings and human art constitute the city. It is an aggregation of individuals and families constructing for themselves homes, and reciprocally carrying forward industries by which they are supplied with the necessaries of life. Aside from this it is an *entrepôt* of the products of the labor of the country, a centre of trade and other forms of reactive industries. The city is fed from the country, but it sends back to the country products which the country could not otherwise obtain.

It is apparent that the sociological forces of the city are so marked as to make it a world, in almost every respect, unlike the country. While the latter consists of broad acres, majestic forests, great rivers, waving fields of grain, nature more or less impressive, with here and there a human habitation, the former is a concentration of the human in life and art, with nature almost shut out of view. Yet the city because of this concentration is not diminutive in the advantages it offers and the impressions it makes, but is an aggregation of power achieving tremendous results. As in the focus of the sun's rays brought together by the "burning glass" there is intense heat, so in the city, life puts on energy, an intensity which burns its way into the heart of society and achieves astonishing results. Indeed, the very grandeur of the city is intense, moving us by an overwhelm-

ing force. It is here that operations are carried forward on a tremendous scale. As electricity scattered through the clouds is powerless, but when it unites its energies in a flash of lightning, it can rend the mightiest oak and dislodge the rock from the mountain summit, so human energies thrown into one seething centre, develop power which is irresistible in its sweep. Here are vast accumulations, the fruit of man's toil, which awe us by their grandeur. Here are mammoth mercantile houses handling the products of all lands; extensive public works in which steam, electricity, compressed air, and hydraulic power become the servants of the human will. There are here great libraries containing the learning of all lands and ages. Magnificent churches are reared, where art takes on its highest forms and beauty adorns that which is imposing. The heart manifests its tender sympathies in great hospitals where every possible provision is made for the sick and the maimed. To live amid that which man has wrought on such a magnificent scale, is to come under human influences which make an indelible impression on both the intellect and heart. The objects of thought, the lines of thinking, are forced upon us by this contact with that which is human. The evil and the good both find in the city a wide field for the display of their special energies. Vice hides from sight more easily than in the country, and crime flourishes in a most productive soil. While benef-

icence here finds the most ample field for its employment, evil introduces the greatest havoc. The young man who goes to the city will come to realize that human nature reaches its grandest heights, but also sinks to its lowest depths. Conscience, sublime moral purposes may be an adequate safeguard, but pitfalls are hidden beneath his feet. Nothing less than a positive and unconquerable aversion to wrong-doing is needed to direct his steps.

In the city we find the most active and determined competition in every great field of endeavor. Will success crown our efforts? It is here that man measures arms with his fellow-man. It is almost wholly a competitive life. The ablest lawyers, the most skilful physicians and surgeons, the most astute politicians, the most eloquent ministers, the sharpest tradesmen, the most capable builders, here have their home and do their work. Largely to share in public favor and stand among the first, requires talent, application, and a will that is not easily overcome. In the country there is scarcely any competition. He who expends almost untold treasures on his farm, in its cultivation, on improvements, on houses and barns, on walks and drives, in any form of ornamentation, does not stand in the way of his neighbor's success, who is getting his livelihood from the soil. Nature will patronize the latter with sunshine and rain not less kindly than the former. But wealth

can make a mercantile house in the city a centre of trade at the expense of the less fortunate dealer. Thus in the city, man, as we have said, is the great factor, and despite all opposing plans and efforts, to a large extent, we become what he makes us to be.

The city is the home of extremes, the theatre of successes and failures, successes which come from association with men, and failures which man forces on his neighbor. It is not the purpose of this chapter to show how successes can be gained and failures avoided, but to point to the fact that the problem is a human problem, that human environment is a major quantity. We succeed or fail through relations with our fellow-men.

The problem of city life, educationally, morally, and in municipal affairs, is one of the most complex of all problems, than which there is none other more vital. There are practical forces in operation which cause an influx from the country into the city. One-third of all the people of the United States dwell to-day in cities, and if the past rate of immigration to these great homes of art and trade shall continue, before the first quarter of the twentieth century shall be passed there will be 10,000,000, more than one-half of our population, living in these congested centres. Yet there are indications that a counter movement is taking place, a movement from the city to the country, not of its general population, but of its wealthier men. The

facilities for railroad travel, the large extension and use of the telegraph and telephone, enable the business man to have his home—not temporarily but permanently — twenty, fifty or more miles away from the city, without interference with his occupation. But this does not reduce the business of the city; it does not lessen the strife; it does not weaken the city's power, but rather extends the city's suburbs, practically widening its influence. The study of the growth, employments, and distinctively human forces of the cities of the world, must bring into notice the influence of man over man in the type of life that is lived, the civilization that is made to prevail, and the dependence mentally of each upon his neighbor.

CHAPTER LXI

POLITICAL FORCES

GOVERNMENT is a necessity. It exists under a divine order of society. Paul says, "The powers that be are ordained of God." Government as an institution is divine; anarchy is Godless. This much, at least, Paul means. But in its form government is human, the creature of human intelligence. There are many things the individual can do alone—with little or no co-operation. In man-

ual labor it is his own muscles at work. In the gaining of knowledge there is the action solely of his mental powers. The prosecution of business is usually largely personal, with only an outward dependence on others. A man keeps or breaks the law of the land in his individual capacity. Governments, except when purely despotic—and these we shall ignore in our discussion—are not the creature of the individual, nor the organ of individual action. They embody the will of the people as a mass—the will of the people in their collective capacity.

Political movements are pre-eminently co-operative movements. They are the public—citizens jointly—moving for the achievement of some end. Whatever is done by the individual is usually in harmony with the plans of a body of voters who unite to effect some purpose in and through the government. The effort made is to rally as large a number of people as possible for the accomplishment of such a purpose. In this work men stand shoulder to shoulder, like the Macedonian army. They form a solid phalanx; if they triumph, they triumph by force of numbers. A party is a political unit, a portion of the whole, agreeing on the tenets of their political faith. A platform is adopted by a convention or accepted through the operation of some special form of agreement. This agreement is the party shibboleth on which they appeal for votes. Every step taken recog-

nizes the public. To carry out party ends in a representative government, men must be elected to office. The first step is to hold caucases and conventions, to put persons in nomination, then going to the people to seek endorsement in the election of the candidates that thus represent the party.

It would be difficult to point to anything else in our experience in which the sociological exerts a greater influence over us. The political press stands for party, and whatever it says is in advocacy of party dogmas. It is seldom that a discussion of principles is simply to enlighten individuals, but to draw them and bind them more closely to the party. Campaigns are organized by party leaders to influence votes. The people are called together, speeches delivered, appeals made to reason, to prejudice, to business interests, exalting the merits of one party and decrying the other, all to get the support of the majority. Printed documents are scattered through every state and community. A house-to-house canvass is made to feel of the public pulse and influence the voters. When the election day arrives special effort is made to get out every citizen who is supposed to have any party predilections. Whatever is done is for the triumph of party.

In nothing else is there so complete a dominance of the many over the individual. It is rarely that opinions are independently formed. Leaders shape the creed and the mass accept it as a whole,

without analysis. Generally the only question raised is, What does the party hold to? Platforms are constructed, in most cases, not to proclaim eternal principles, but to secure the favor of certain industries, classes of people, or sections of the country. It is not statesmanship, but party ascendancy, that is kept in view. And when a man enters the ranks of a political organization he is expected to stand by it even though a complete change of front may take place. The party carries and dictates the political creed of the individual. To this there are exceptions, men standing aloof when their convictions of policy have been set at naught, but such cases are by no means common. In politics men go in a body and keep step with the procession. And it is not easy to break out of the ranks. If it be done, the individual is branded as a traitor, or at least is called a renegade. All hopes of preferment must be surrendered, for he alone is "faithful" who clings to his party rather than to principle.

In nothing is there more peril to free government than in the tyranny of party. There are many ways of exacting submission to political dictation which are ordinarily effective, and it is not until these organizations completely betray public interests, or get out of harmony with movements which appeal with great force to the public conscience, that the bonds give way and the individual is set free. In considering, therefore, the sociological

forces which take hold upon human life, we discover their action in almost irresistible power in the domain of politics and government. An individual alone is impotent, he puts on strength only when he throws in his lot with others.

The necessity of government, and of right government, shows the importance of a general and careful study of the principles which enter into the structure of the state. Politics cannot be ignored, but there should be thrown into it more of intelligence, of conscience, and independence of action. With more intelligence and conscience there will be more independence. There is no mission of greater usefulness than the right guidance of the state. With us every citizen has a voice in the management of public affairs, and that voice should be lifted up in behalf of right that we may enact just laws, that liberty shall not be license but the ascendancy of reason in human affairs; that all shall equitably bear the burdens which come from statehood; that obligation shall be seen to be co-ordinate with privilege—to bring about the largest measure of happiness and good. Selfish politics is a perversion of statesmanship. The remedy is not to keep aloof from it, but to make personal, intelligent power felt for its regeneration and guidance. Thus will its influence over the lives of the people be purified, and civilization will be imbued with an ennobling spirit.

Educationally, much depends on the principles

upon which government is constructed, and upon the policies pursued. A despotism is repressive of rights, and hence deadens the inspiration for action. The individual deprived of opportunity to exercise political franchises, and freed from all obligation to exert power in behalf of public good, will not study the problems of statehood, he will be quite sure to remain unintelligent in regard to the great interests involved in civil affairs. Should he come to realize the wrong of despotism it is almost certain that he will verge to the opposite extreme of anarchy. In irresponsible power, despotism and anarchy—the despotism of the one or the many—are near neighbors. The Czar of Russia, on the one hand, and the Nihilist, on the other, though standing at opposite extremes, are alike in discarding responsibility. Lawlessness is the legitimate result of irresponsible activity. In such a case, might makes right.

Institutional government, in which there are wholesome checks, great energy, but held to strict accountability, in which every citizen is invested with rights on which authority rests for its exercise, puts the subject in the most favorable condition for individual education in the broad range of intellectual manhood. To be a citizen of a country thus governed, is to possess advantages on which the best life can be built as well as to have the highest security for personal good guaranteed. A despotic land is fated to keep on a low level

of intelligence as well as of recognized rights; but when civil power is in the hands of the people, under equitable regulations for its exercise, the trend is toward intelligence, and the political well-being of the people.

Before closing this chapter we must not neglect to say that there is much of harm done by prevailing political methods. Partisan politics exerts a wide-spread influence for the forming of judgments on insufficient grounds. This engenders either shallowness or insincerity. No political campaign, no political movement, is carried forward with perfect frankness. On the one side truth is suppressed; on the other it is greatly exaggerated. If truths are uttered they are largely half-truths, almost as pernicious as positive falsehoods. Everything is done in the spirit of the advocate, not of the judge. There is much reason for the charge that the leaders are dishonest—this certainly is true that most of them do not paint the picture with all the colors that should be introduced, or yet the colors employed are used in excess and with misleading brilliancy. This is seen in the partisan press, on the "stump," and in private electioneering work. The educational effect is not only a perversion of truth, but incompetency to form right and candid judgments. All of this is greatly to be deplored. The public, without being aware of it, comes under the sway of these malign influences, and suffers at the core of

character. Governments we must have, and political forces must be employed, but the tyranny of party needs to be set aside and political methods reformed. This will be effected only by greater intelligence as to public affairs, and the injection of more of moral integrity into political movements through the spirit of the gospel of Christ. It is a hopeful sign in these days that the number of citizens disposed to examine both sides of political questions is certainly increasing. It is ardently to be hoped that they will soon hold the balance of power, and compel fairness of treatment of all problems involving political interests.

The young man who surrenders himself to political ambitions and follows the methods which now prevail, runs the risk of impairing his manhood; he puts himself in a flood-tide of forces which are likely to sweep him far out to sea in his moral character. Immovable moral anchorage is needed for personal safety.

CHAPTER LXII

THE CHURCH AS A SOCIOLOGICAL ORGANISM

The religious is a universal sentiment. No nation or tribe has ever existed without it. It is therefore fundamental in human life, and to discard it in treating of man's nature would be the

omission of an essential factor of his being. Intuitively the race has a conviction of a supernatural. Christianity does not create this conviction, but turns the gaze away from false gods to the "only living and true God," revealed to us in the Bible. The religions of the world have been a potent force in human history, and Christianity, while it dispels the irrational superstitions which have had so large a place in religious beliefs, is not less effective in turning our attention to supernatural things.

The energy of Christianity is in itself as a divine spiritual force. "The excellency of the power is of God, not of men." No external appliances or human agencies can effect spiritual transformations. This, we hold, must come purely from some divine act. Yet the spread of the gospel is a great sociological problem. There is here a human element as well as a divine force, and through the human this divine force is applied. So far as there is any uncertainty in the prosecution of the work of saving men, it comes from that which is human.

The Church has an organic life. It is a body of men associated together for mutual religious help and for the employment of means to carry the gospel to others. The Bible is a treasury of truths supplied the Church for its enlightenment and guidance. In this word Jesus Christ is made known to us as "God manifest in the flesh," bringing a divine life to the world. That the nations

might know of Him and accept His offers of mercy the ministry was instituted under this explicit command, "Go ye into all the world and preach the gospel to every creature," with the positive declaration that they who accept shall be saved. This is the provision for the spiritual regeneration of the world. Men preaching Christ! Angels are not employed, and God does not carry forward the work independently of human agency. Two facts must be taken into the account:

a. The power is of God.

b. This power is exerted only in connection with human co-operation.

These two facts must be considered together. That the human is employed does not weaken the evidence that a divine force is exerted. Yet the human is made always to condition the divine. We have no reason to believe that God transforms the life of any man except through, or in connection with, human agency. Power and provision conditioning the exercise of power are quite distinct the one from the other, though each be necessary for the other. The most perfect locomotive possesses no energy of locomotion; and the steam in which all energy resides cannot of itself move the railroad train. But the locomotive holds the steam energy in its grasp and connects it with the train so that it can act upon it—this and this only it does—and the train moves. The power is all in the steam, but the locomotive is not less es-

sential than the steam power itself for the accomplishment of the desired result. The cannon does not hurl the ball out into space, and yet the ball would not go were it not for the cannon. The force is in the powder as it is converted into gases in combustion. But you desire that the force generated in the expansion secured should be applied at a certain point and only in one direction —not in all directions—so the cannon is constructed to restrain this expansive force on all sides but one, concentrating it on a single line of action. The powder does the work, but the cannon supplies the condition in which alone the work can be done. The lens does not set fire to the combustible substance when it brings the sun's rays to a focus. The heat was all in the rays before they were focalized. Its sole, but most important, office is in bringing to a point that which before was scattered. It does not make power, it utilizes it.

God is in the heavens. He is invisible to mortal eyes. To Him all nations and peoples must turn to receive the benefit of His saving grace. He has therefore put in operation a scheme of human representation. He has commissioned men to go forth to proclaim His gospel to the peoples of the earth. The work is to hold up Christ, to keep Him in men's thoughts so that the divine Spirit can get hold of the conscience to perform His great work of transforming the life.

In stating that the power of the gospel is not

human we do not, as we have shown, depreciate the value of the human, we do not make it uninfluential. The spread of the gospel, the extent of results achieved, rests wholly on the fidelity and perfection of the human through which divine power is exerted. It will not be considered, then, a matter of indifference who and what the minister shall be who brings his message to the people. He who is learned can achieve larger results than the unlearned. Talent, scholarship, power of expression, strength of personality, are of the highest importance in the practical movements of the Church. The gospel accomplishes its grandest work when the ministry is most able, the appliances used most rational, and the Church is most nearly perfect. It should be a matter of conscience to put on the most of personal strength through study and training for the work of the ministry. God's representative should strive to reach the highest grade of qualifications for his sublime calling. The military ordnance in use to-day is far more effective than that employed a hundred, or fifty years ago, even with the use of the same powder. This is not by the generation of more power, but by its more complete utilization through improved construction of the ordnance. The cannon of to-day, to continue our illustration, is the cannon of the past more highly educated. And surely human agencies need not be less responsive to efforts for improvement than the metal of which military

ordnance is constructed. Scholarship commands more of truth, eloquence presents it in a more effective manner, the greater ability to arouse attention opens the way more widely for the entrance of truth, so that with these favorable conditions the message presented is sure to be more effective.

Writing up the influence of the religions of the world, we would be writing up largely the history of the world. The power they have sociologically exerted has been felt in every land, affecting every interest of society. China is what she is because of her religious dogmas. Her entire civil polity is an outgrowth therefrom. The worship of ancestry dwelling all about them has among the Chinese held back every improvement, made progress impossible, and led to a type of life found nowhere else among the nations of the earth. Judaism built up a spirit of race exclusiveness which has not given way through these two thousand years. Buddhism is rest; to not-be is the highest good; not to rise by individual effort, not to develop the might of the personal, but to become lost or absorbed in eternal repose; this is antagonistic to industry and repressive of personal ambition. Divine sovereignty, with no place for the individual will, would belittle man in the act of thus exalting God, and free will without divine sovereignty would debase God. But divine sovereignty joined with man's free will preserves the authority of the Infinite, and makes man responsible for

all his acts. Into every-day life our theology penetrates, and every interest is affected thereby.

We call our civilization a Christian civilization. That business is suspended on the Sabbath, with a general conviction of the sacredness of the day, not only indicates the existence of a religious sentiment, but spreads over the country a religious spirit. With this day come religious assemblies, that which is secular giving way to that which tells of God and an eternal future. Business acknowledges subordination to that which is religious. No legal documents can be executed on the Sabbath. No work that would interfere with divine worship can be performed. And out further than this legislation reaches. The law makes the rights of religious bodies to church property as absolute as of the individual. The President and Governors appoint a day for special thanksgiving to God, and the citizen thereon is exempted from labor. The Chief Executive takes his oath of office on the Bible as a divine Word. Chaplains are appointed for the army, the navy, for congress and state institutions, and paid from the public treasury. All through our statehood there is a recognition of God, and no one can live in this land without coming under the influence of the Church in his conception of duty, of rights and privileges, and without gaining an education—whether he connects himself with the Church or not—in which the religious holds a large place.

As through the order, machinery, and operations of political affairs, society of which the individual is a part, takes on some particular caste and gathers in some particular type of spirit, getting an education that is wrought into the very warp of life, so through the Church by means of the press, the Sabbath, the pulpit, the Sunday-school, the meeting for prayer, the Christian Associations, the state recognition of religious verities, a religious life is crystallized in our being and our education is far more than the product of the schools. The Church is a sociological organism established to act on society, through human instrumentalities to influence and mould the body politic.

The life which the individual lives is the result of unnumbered forces acting within him. Nature speaks to us from the earth and sky. The soul looks forth and catches inspiration from the phenomena of the outer world. The industries with which we must daily have to do, the companionship of friends, the ambitions in the state, the sublime realities in the spiritual world, the experiences through which we pass, the desire for a fuller knowledge of truth, the aspiration for that which is good or the craving for what is evil, all exert their power to make us what we are. Into the midst of all these experiences and movements comes the Church as a sociological agency to lead the thoughts to religious realities, and model the life of society according to a divine plan.

THE GATHERED THREADS

CHAPTER LXIII

THE COMPLETE MAN

THE complete man is not the completed man. Man completed would cease to be man, just as the river with its banks full of water, but receiving no new supply, is no longer a river, but a lake or a pond. Manhood is less what the individual is than what he is capable of becoming and seeking to be; less the content of life than the trend of life. Complete manhood is a fulness of powers and a right disposition for the use of the powers.

This treatise presents an analysis of the faculties of a human being. There are powers of cognition, energies of feeling responsive to the action of intelligence, and executive powers for the translation of intelligence and feeling into action. There is thus a unity of life constituted of diverse but co-operative mental forces. Associated with these forces, and dependent upon them, but contributing to the realization of their purpose, is a physical nature. Man is spirit dwelling in a body which is both its servant and its master, listening to the commands of the spirit and supplying it with energies by which the pur-

pose of life may be realized, putting it in connection with the outer world as a theatre for personal action. Through the genesis of his being he is a constituent of a race—in universal humanity—with interests in common with the race, with duties to perform, and subject to a reactive influence, of that which is about him, on his own life. He is the complete man, who perfectly fits into his environment, who rightly acts upon it and employs his energies for the fullest realization of the purposes of his being.

Intellectually this is not largely a question of scholarship, of the extent of knowledge gained, but of the ability to know and the reaching out of the soul after knowledge. The thresher is as actually a thresher before it does the work as after the work is done. The steamer is not more complete after it carries its precious load of life across the sea, than before it leaves the port. The man at twenty-five is as truly a man—though not with as large a mental equipment—as at fifty, provided the energies of his nature are as active, his ambitions for achievement as great, and his fidelity to truth and right as inflexible.

In genuine manhood, manhood of the largest measure, there is a longing of the soul for knowledge, an intellectual trend, positive and intense, that is ceaseless in its pursuit of truth. Now, in God's life there is the comprehension of all verities. As fundamental to Godhead there is infinite

knowledge. If we are created in His likeness the intellectual must be an active energy in the great world of being. When these powers are employed up to the measure of their capability, not falling below a right estimate of truth, on this side of our nature, completeness is manifested. The creation, in the midst of which we are placed, is the fulfilment of a divine plan, the unfolding and revelations of the thoughts of God. If these thoughts are important enough to be embodied in His works, they are surely important enough to merit our closest and eager attention. Indeed, we cannot account for their existence except to supply the intellectual wants of His creatures. God would not hold up to our gaze a perfect system of reason, sufficient to call into action all our energies of rational comprehension, and fitted to develop the inner life up to its highest plane, did He not intend it for this special end. Every individual drops just so far below the life he was meant to live, as his knowledge is meagre compared with his capabilities of gaining it.

The complete man is not only intellectually progressive, but possesses sensibilities alive to the world of truth and reality in which he dwells. He sees beauty where there is beauty; he is thrilled by that which is sublime; his heart responds to all that is pure and noble; his sympathies are aroused by every wail of distress, and joy gladdens his heart when fortune smiles upon those by

whom he is surrounded. Right, justice, and mercy awaken feelings of approval. The impulses of his heart are as active and true as the intellect is comprehensive. He scorns vice, he prizes virtue. That which is lovely brings to him pleasure, and every violation of the moral law gives him pain. His heart is as broad as his intellect, and delights in all that is good and spurns all that is evil. Keenly alive to the moral qualities of every act, his whole being spontaneously takes sides with those who are right, generous, and true. The complete man is manly, considerate of the feelings of others, and responsive to all the calls of humanity.

Many persons fail to perform acts which reason endorses and the heart approves. He only is complete in his manhood whose steps do not lag behind his reason, whose practical movements keep up with his sympathies and his sense of right. It is a charge carrying with it the fullest condemnation when it is said, "Ye knew your duty but ye did it not." In complete manhood two qualities must characterize the will; it must be quickly responsive to the intelligence of the individual, and the action must not be less vigorous than the occasion requires. A feeble blow in the presence of a great emergency proclaims a lack, fatal to symmetry of life. Conscience can be satisfied only when duty is not only promptly, but fully, met; when the choice agrees with the conviction of the mind, and there is no hesitancy in

making the decision that should be made; and when the whole life puts its powers at the service of reason and truth. Timid or feeble steps court defeat.

We are not responsible for inherited physical defects; but we are responsible for improper care of the senses through which we gain knowledge, and for the impairment of the health of the body which was intended to be the servant of the mind. "Mens sana in corpore sano" constitutes the "summum bonum" of being. To trifle with bodily powers; to allow them to become the slave of the passions; to pervert their action from the purpose for which they were given, is a sin against both body and mind. Harmony with the high office and strict purpose of the soul, is the only legitimate function of the body. In the complete man the body does not dictate to the soul, reason is at the helm of life; all the passions are in subjection, and the harmony of movement is secured by an attentive listening to the voice of enlightened conscience.

God created each individual for a life here on the earth, in the midst of social conditions, from which he cannot lawfully withdraw. We are in this world of human beings to share with them great responsibilities. To disregard the interests of others, in our activities, is to commit a grave offence. The industries of life consist of labor applied to capital. Capital is the excess of pro-

duction over consumption. Capital and labor are mutually dependent, for capital is useless without labor, and labor cannot find employment without capital. No one is entitled to the designation of a complete man who does not do the work of a man. In some department of industry every person should be employed. His capabilities represent duties; they stand for obligations; and to shirk obligations is to violate a moral law. He is faithless who does not contribute something—and to the full extent of his powers—to the well-being of the race to which he belongs in a social partnership. Through each of us the capital of the world should become greater in the line of physical industries, or, at least, our fellow-men should be helped in some department of life by the efforts we put forth. Indolence is a crime against both God and man. To live in the world, exhausting its resources, is robbery; to leave powers unemployed which could contribute to the general good, is reprehensibly to fail to carry our part of the burdens of life. It is the duty of every individual to do something toward the enriching of the world. To labor for personal ends only, shows incomplete manhood.

There are political obligations resting on us, which obligations are not fully met by our refraining to support the wrong; they require positive action for the support of the right. It is by no means a compliment, which the individual seeks to

pay himself, when he says that he is not a politician, that he has nothing to do with politics. Such a one asks the government to protect his rights, and yet does nothing to contribute to the strength and efficiency of government. He demands unrequited service. He takes what he is unwilling to pay for; he is a constant debtor to society. This is moral bankruptcy.

Not unfrequently as an excuse for irreligious acts we hear a person say that he is not a Christian, that he makes no profession of a religious life. Is the admission of a wrong or defect a rational defence? The highest of all obligations is the religious—to honor God and promote the supreme interests of the race. These impose on us the duty of personal submission to divine authority, and of co-operation with God to carry forward the work of the regeneration of the race. Complete manhood recognizes existing obligations, and it carries with it an earnest desire to fulfil these obligations. Not, what must I do, but what can I do, is the spirit which prompts the performance of religious work.

Without further enumeration we say that the principle involved is this, that being a member of the race it devolves on me to sustain fully the interests of the race; sharing in the benefits of its industries, receiving protection from the government, blessed by the spread of Christian truth and the prevalence in society of a Christian spirit,

being a recipient of unnumbered blessings through and in connection with the life of the family of man under a divine superintending Providence, it devolves on me as a man to do what I can to add to the happiness and advancement of the people in all their temporal and spiritual interests. To do this I should train the life God has given me for the largest measure of activity, and conscientiously and eagerly devote the powers I possess, to the spread of truth and the advancement of right. The complete man fully fills the place he was intended to occupy. In spirit, manhood is complete when it presses on toward this goal. It is not the largest achievement of desirable results thus far gained, but the strongest purpose and the most intense employment of powers to accomplish the good, for which the energies of our being were created. This is complete manhood.

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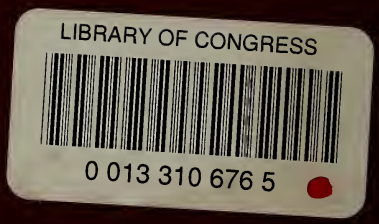
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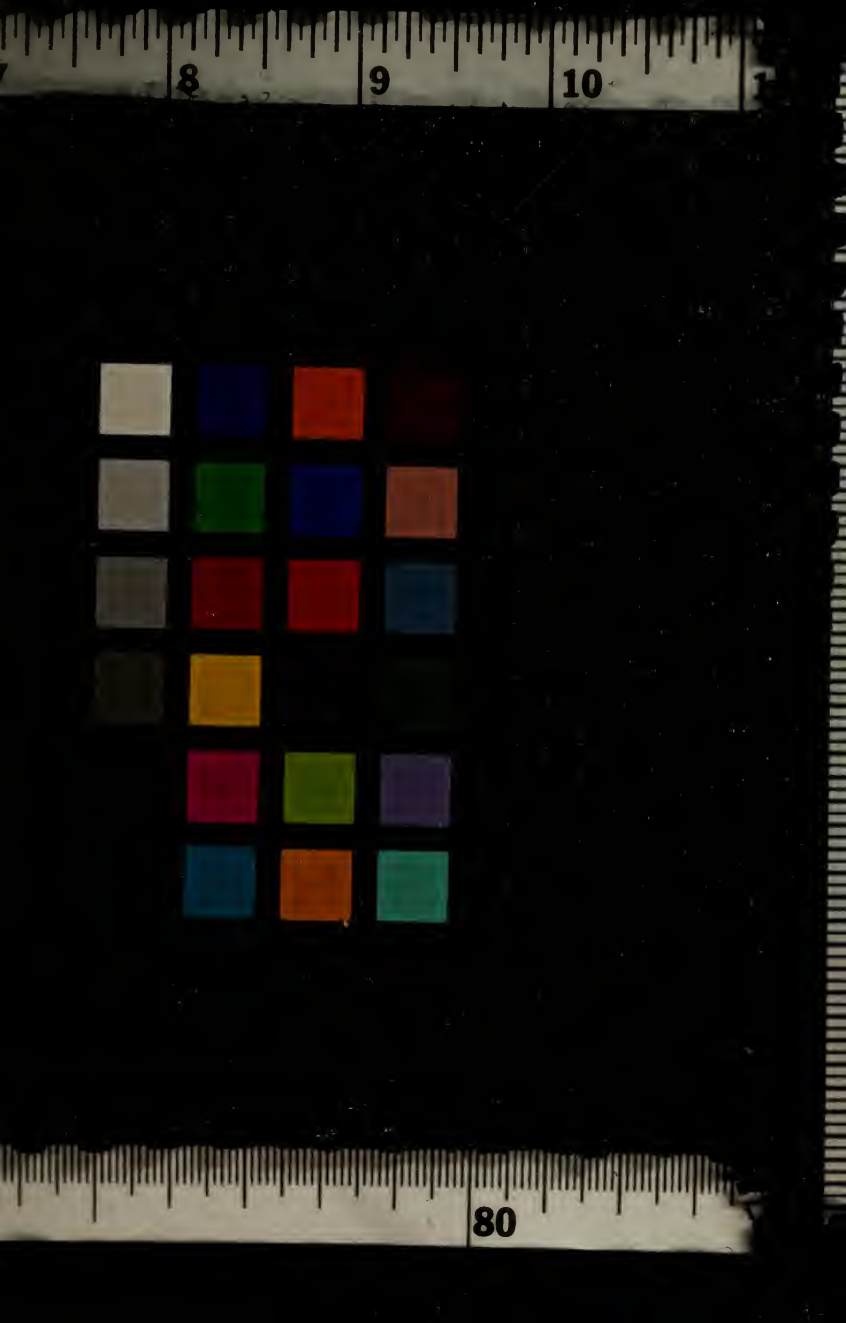
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